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OM protein - protein search, using sw model

Run on: December 12, 2003, 16:32:31 ; Search time 35.1205 Seconds
(without alignments)
497.144 Million cell updates/sec

Title: US-09-852-261-2

Perfect score: 598

Sequence: 1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched: 1107863 seqs, 158726573 residues

Total number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

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2: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*

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23: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2002.DAT:*

24: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2003.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query				Description
		Match	Length	DB	ID	
1	598	100.0	110	22	AAE02447	Human IGF-I isoform
2	598	100.0	110	23	AAU10559	Human mechano-grow
3	572.5	95.7	111	22	AAE02449	Rabbit IGF-I isofo
4	572.5	95.7	111	23	AAU10561	Rabbit mechano-gro
5	572.5	95.7	121	18	AAW23301	Rabbit insulin lik
6	560	93.6	195	8	AAP70277	Sequence of pre-pr
7	521.5	87.2	133	24	ABP58085	Mouse insulin-like
8	494.5	82.7	111	22	AAE02448	Rat IGF-I isoform
9	494.5	82.7	111	23	AAU10560	Rat mechano-growth
10	468	78.3	105	22	AAE02450	Human liver-type I
11	468	78.3	105	23	AAU10562	Human insulin-like
12	468	78.3	137	22	AAU09067	Human insulin-like
13	468	78.3	153	16	AAR83803	Insulin-like growt
14	468	78.3	153	19	AAW69733	Human IGF-1. Homo
15	468	78.3	153	19	AAW57882	Human IGF-I protei
16	468	78.3	153	23	AAU84284	Human endometrial
17	468	78.3	153	23	AAU84341	Protein IGF1 diffe
18	468	78.3	156	18	AAW23302	Human insulin like
19	465	77.8	105	22	AAE02452	Rabbit liver-type
20	465	77.8	105	23	AAU10564	Rabbit insulin-lik
21	461	77.1	119	7	AAP60578	Human prepro-somat
22	459	76.8	105	22	AAE02456	Rabbit liver-type
23	459	76.8	154	14	AAR40844	Goat Insulin like
24	457.5	76.5	191	19	AAW64068	Chimeric rhIGF-I-A
25	457.5	76.5	191	23	AAE24881	Yeast alpha factor
26	423	70.7	105	22	AAE02451	Rat liver-type IGF
27	423	70.7	105	22	AAE02531	Rat liver-type IGF
28	423	70.7	105	23	AAU10563	Rat insulin-like g
29	412	68.9	78	21	AAV98482	Pep 17 used in nuc
30	412	68.9	78	21	AAV59027	Peptide ligand Pep
31	412	68.9	78	22	AAU04272	Nuclear ligand Pep
32	412	68.9	78	22	AAB45835	Nucleic acid trans
33	398	66.6	176	17	AAR88089	Rainbow trout insu
34	386	64.5	953	19	AAW56011	Recombinant botuli
35	385	64.4	70	5	AAP40034	Sequence of human
36	385	64.4	70	8	AAP70414	Sequence of oxidat
37	385	64.4	70	8	AAP71539	Sequence of human
38	385	64.4	70	10	AAP91502	New insulin-like g
39	385	64.4	70	14	AAR36846	Insulin-like growt
40	385	64.4	70	14	AAR41774	hIGF-I. Homo sapi
41	385	64.4	70	14	AAR43606	Peptide derived fr
42	385	64.4	70	15	AAR48590	Human IGF-I peptid
43	385	64.4	70	15	AAR55275	Sequence of insuli
44	385	64.4	70	16	AAR75657	Human insulin-like
45	385	64.4	70	17	AAR86874	Insulin like growt

ALIGNMENTS

RESULT 1

AAE02447

ID AAE02447 standard; Protein; 110 AA.

XX

AC AAE02447;

XX

DT 10-AUG-2001 (first entry)

XX

DE Human IGF-I isoform mechano-growth factor (MGF) protein.

XX

KW Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
KW sex-linked muscular dystrophy; peripheral neuropathy;
KW Alzheimer's disease; Parkinson's disease.

XX

OS Homo sapiens.

XX

PN WO200136483-A1.

XX

PD 25-MAY-2001.

XX

PF 15-NOV-2000; 2000WO-GB04354.

XX

PR 15-NOV-1999; 99GB-0026968.

XX

PA (UNLO) UNIV COLLEGE LONDON.

XX

PI Goldspink G, Johnson I;

XX

DR WPI; 2001-355620/37.

DR N-PSDB; AAD06398.

XX

PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -

XX

PS Claim 4; Page 50-51; 66pp; English.

XX

CC The present invention relates to use of mechano-growth factor (MGF),
CC an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurones and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurones, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease.
CC The present sequence is human IGF-I isoform MGF. MGF is a muscle

XX
PS Claim 11; Fig 5; 65pp; English.

CC The invention relates to the use of an insulin-like growth factor I
CC (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture
CC of a medicament for treating nerve damage in the peripheral nervous
CC system, or for treating nerve damage by localising MGF at the site of
CC damage. The nerve damage may include severing of a nerve. The treatment
CC may be combined with another treatment (such as a polypeptide growth
CC factor other than MGF) that prevents or diminishes degeneration of the
CC target organ (for example, muscle) which the damaged nerve innervates,
CC whereby the treatment of the muscle with MGF or a polynucleotide encoding
CC MGF prevents or diminishes degeneration. The method is useful for
CC treating neurological disorders, preferably motoneuron disorders. These
CC methods can reduce motoneuron loss by 20% or greater in response to nerve
CC avulsion. This sequence represents the human MGF polypeptide.

XX
SQ Sequence 110 AA;

Query Match 100.0%; Score 598; DB 23; Length 110;
Best Local Similarity 100.0%; Pred. No. 3.3e-54;
Matches 110; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60

Db 1 GPETILCGAELVDAHQFVCGDRGFYFNKPTGYGSSSSRAQPTGIVDECCFRSCDLRRLEMY 60

QY 61 CAPLKPAKSARSVRAQRHTDMPKTKQYQPSTNKNNTKSQRRLKGSTFEEHK 110

RESULT 3

REF ID: S
AE02449

ID AAE02449 standard: Protein: 111 AA

10
YY

AC AAE02449 :

xx

DT 10-AUG-2001 (first entry)

xx

DE Rabbit IGF-I isoform mechano-growth factor (MGF) protein.

xx

KW Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
KW sex-linked muscular dystrophy; peripheral neuropathy;
KW Alzheimer's disease; Parkinson's disease.

xx

OS Oryctolagus cuniculus.

xx

PN WO200136483-A1 .

xx

PD 25-MAY-2001.

xx

PF 15-NOV-2000; 2000WO-GB04354 .

XX
PR 15-NOV-1999; 99GB-0026968.
XX
PA (UNLO) UNIV COLLEGE LONDON.
XX
PI Goldspink G, Johnson I;
XX
DR WPI; 2001-355620/37.
DR N-PSDB; AAD06400.
XX
PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
XX
PS Claim 4; Page 54; 66pp; English.
XX
CC The present invention relates to use of mechano-growth factor (MGF),
CC an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurones and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurones, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease.
CC The present sequence is rabbit IGF-I isoform MGF. MGF is a muscle
CC isoform having extracellular (Ec) domain, hence also referred as
CC IGF-I-Ec. The MGF protein comprises amino acid sequences encoded by
CC nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
CC of MGF.
XX
SQ Sequence 111 AA;

Query Match 95.7%; Score 572.5; DB 22; Length 111;
Best Local Similarity 96.4%; Pred. No. 1.5e-51;
Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60

Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTN KNTKSQ-RRKGSTFEEHK 110
Db 61 CAPLKPAKAAR SVRAQRHTDMPKTQKYQPPSTN KKMKSQRRKGSTFEEHK 111

RESULT 4
AAU10561
ID AAU10561 standard; Protein; 111 AA.
XX
AC AAU10561;

XX
DT 25-FEB-2002 (first entry)
XX
DE Rabbit mechano-growth factor (MGF) polypeptide.
XX
KW Rabbit; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
KW neuroprotective; nerve damage; peripheral nervous system; nerve severing;
KW muscle; neurological disorder; motoneuron loss; motorneuron disorder;
KW nerve avulsion.
XX
OS Oryctolagus cuniculus.
XX
PN WO200185781-A2.
XX
PD 15-NOV-2001.
XX
PF 10-MAY-2001; 2001WO-GB02054.
XX
PR 10-MAY-2000; 2000GB-0011278.
XX
PA (UNLO) UNIV COLLEGE LONDON.
PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.
XX
PI Goldspink G, Terenghi G;
XX
DR WPI; 2002-055585/07.
DR N-PSDB; AAS16879.
XX
PT Use of insulin-like growth factor I (IGF-I) isoform known as
PT mechano-growth factor which is encoded by IGF-I exons 4,5,6 and has
PT ability to reduce motoneuron loss in response to nerve avulsion, to
PT treat nerve damage -
XX
PS Claim 11; Fig 7; 65pp; English.
XX
CC The invention relates to the use of an insulin-like growth factor I
CC (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture
CC of a medicament for treating nerve damage in the peripheral nervous
CC system, or for treating nerve damage by localising MGF at the site of
CC damage. The nerve damage may include severing of a nerve. The treatment
CC may be combined with another treatment (such as a polypeptide growth
CC factor other than MGF) that prevents or diminishes degeneration of the
CC target organ (for example, muscle) which the damaged nerve innervates,
CC whereby the treatment of the muscle with MGF or a polynucleotide encoding
CC MGF prevents or diminishes degeneration. The method is useful for
CC treating neurological disorders, preferably motorneuron disorders. These
CC methods can reduce motoneuron loss by 20% or greater in response to nerve
CC avulsion. This sequence represents the rabbit MGF polypeptide.
XX
SO Sequence 111 AA:

Query Match 95.7%; Score 572.5; DB 23; Length 111;
Best Local Similarity 96.4%; Pred. No. 1.5e-51;
Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;

QY 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTNNTKSQ-RRKGSTFEEHK 110
||| ||| : ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 61 CAPLKPAKAAR SVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKGSTFEEHK 111

RESULT 5

AAW23301

ID AAW23301 standard; Protein; 121 AA.

XX

AC AAW23301;

XX

DT 14-APR-1998 (first entry)

XX

DE Rabbit insulin like growth factor 1.

XX

KW Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder;

KW heart; neuromuscular disease.

XX

OS Oryctolagus cuniculus.

XX

PN WO9733997-A1.

XX

PD 18-SEP-1997.

XX

PF 11-MAR-1997; 97WO-GB00658.

XX

PR 11-MAR-1996; 96GB-0005124.

XX

PA (UNLO) ROYAL FREE HOSPITAL SCHOOL MED.

XX

PI Goldspink G;

XX

DR WPI; 1997-470877/43.

DR N-PSDB; AAT84893.

XX

PT Use of insulin like growth factor I characterised by presence of Ec peptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases

XX

PS Disclosure; Fig 3; 33pp; English.

XX

CC A use of insulin like growth factor I (IGF-1) has been developed, and
CC is characterised by the presence of the Ec peptide, or a functional
CC equivalent, in the treatment or therapy of a human or animal. The IGF-1
CC polypeptide can be used to treat muscular disorders, e.g. Duchenne or
CC Becker muscular dystrophy, autosomal dystrophies and related progressive
CC skeletal muscle weakness and wasting, muscle atrophy in ageing humans,
CC spinal cord injury induced muscle atrophy and neuromuscular diseases,
CC and cardiac disorders, e.g. diseases where promotion of cardiac muscle
CC protein synthesis is a beneficial treatment, cardiomyopathies and acute
CC heart failure or insult, specifically myocarditis or myocardial
CC infarction. It can also be used to promote bone fracture healing and
CC maintenance of bone in old age. The present sequence represents rabbit
CC IGF-1 used in the present specification.

XX

SQ Sequence 121 AA;

Query Match 95.7%; Score 572.5; DB 18; Length 121;
Best Local Similarity 96.4%; Pred. No. 1.6e-51;
Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 11 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 70

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
Db 71 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKGSTFEEHK 121

RESULT 6

AAP70277

ID AAP70277 standard; protein; 195 AA.

XX

AC AAP70277;

XX

DT 25-MAR-2003 (updated)

DT 05-APR-1991 (first entry)

XX

DE Sequence of pre-pro-insulin-like growth factor 1B (ppIGF-1B).

XX

KW Growth promoter; lactation enhancer; cell proliferation.

XX

OS Homo sapiens.

XX

PN EP229750-A.

XX

PD 22-JUL-1987.

XX

PF 06-JAN-1987; 87EP-0870001.

XX

PR 20-NOV-1986; 86US-0929671.

PR 07-JAN-1986; 86US-0816662.

XX

PA (UNIW) UNIV WASHINGTON.

XX

PI Krivi GG, Rotwein PS;

XX

DR WPI; 1987-200203/29.

XX

PT New pre-pro-insulin-like growth factor-1 protein - obtd. by

PT recombinant DNA procedures for use as growth promoters for

PT enhancing lactation, for stimulating cell proliferation etc.

XX

PS Claim 11; Fig 6; 59pp; English.

XX

CC A 42 base oligonucleotide corresponding to the DNA sequence encoding

CC amino acids 10 to 23 of mature human IGF-I was synthesized (AAN70437).

CC The radiolabeled 42 mer was then employed to screen for IGF-I

CC containing DNA sequences in a human liver cDNA library. Insulin-

CC like growth factors-1A and -1B cDNAs were isolated from a human cDNA

CC library by using lambda gt 11 (AAN70435, AAN70436). The human IGF-1

CC genomic gene was isolated and mapped. It encodes at least two
CC preproinsulin-like growth factor-1 proteins. An essentially pure
CC proproinsulin-like growth factor-1 protein comprising the sequence
CC of amino acids shown in Figure six is claimed (AAP70277).
CC (Updated on 25-MAR-2003 to correct PA field.)
XX

SQ Sequence 195 AA;

Query Match 93.6%; Score 560; DB 8; Length 195;
Best Local Similarity 100.0%; Pred. No. 5.2e-50;
Matches 103; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 49 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 103
Db 109 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 151

RESULT 7

ABP58085

ID ABP58085 standard; Protein; 133 AA.

XX

AC ABP58085;

XX

DT 07-MAR-2003 (first entry)

XX

DE Mouse insulin-like growth factor IB.

XX

KW Insulin-like growth factor IB; IGF-IB; mouse; mRNA; assay;
KW nucleic acid detection.

XX

OS Mus musculus.

XX

PN WO200297390-A2.

XX

PD 05-DEC-2002.

XX

PF 31-MAY-2002; 2002WO-SE01056.

XX

PR 01-JUN-2001; 2001SE-0001934.

XX

PA (BIOV-) BIOVITRUM AB.

XX

PI Parrow V, Rosengren L;

XX

DR WPI; 2003-129529/12.

DR N-PSDB; ABV76185.

XX

PT Quantitating a target nucleic acid in a sample comprises immobilizing,
PT on a solid support, a sample comprising a target nucleic acid, and
PT detecting and quantitating signals generated from the antisense and
PT sense probes -

XX

PS Example 1; Page 17; 18pp; English.

XX

CC The present sequence is the protein sequence of murine insulin-like
CC growth factor 1B (IGF-1B). IGF-1B cDNA was used in an example of
CC the method of the invention to generate probes for determination of
CC IGF-1B RNA. The method comprises a quantitative hybridisation
CC assay for analysis of mRNA in a target nucleic acid (TNA) sample.
CC It involves: (i) immobilising the TNA sample on a solid support;
CC (ii) contacting a labelled antisense probe to a first portion of the
CC TNA, and a labelled sense probe to a second portion of the TNA;
CC (iii) detecting and quantitating the signals generated from the
CC hybridised probes; and (iv) determining the value represented by
CC the antisense probe signal minus the sense probe signal, the value
CC being proportional to the amount of mRNA in the TNA sample. In an
CC example of the method, a cDNA clone containing 60 nucleotides from
CC exon 2 and 179 nucleotides from exon 3 of the mouse IGF-1B gene was
CC cloned into pGEN-4Z vector. Linearisation of the plasmid with
CC EcoRI allowed transcription of a 250-nucleotide antisense probe
CC using T7 polymerase. Linearisation with HindIII allowed
CC transcription of a sense probe of similar length using SP6
CC polymerase (see ABV76186). The probes were purified and used to
CC determine IGF-1 RNA in mouse hepatocytes and also in rat hepatocytes.

XX

SQ Sequence 133 AA;

Query Match 87.2%; Score 521.5; DB 24; Length 133;
Best Local Similarity 89.2%; Pred. No. 3.3e-46;
Matches 99; Conservative 2; Mismatches 9; Indels 1; Gaps 1;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 23 GPETLCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
||| ||| | : ||| : ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 83 CAPLKPTKAARSIRAQRHTDMPKTQKSPSLSTNKKTKLQRRRKGSTFEEHK 133

RESULT 8

AAE02448

ID AAE02448 standard; Protein; 111 AA.

XX

AC AAE02448;

XX

DT 10-AUG-2001 (first entry)

XX

DE Rat IGF-I isoform mechano-growth factor (MGF) protein.

XX

KW Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
KW poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
KW sex-linked muscular dystrophy; peripheral neuropathy;
KW Alzheimer's disease; Parkinson's disease.

XX

OS Rattus sp.

XX

PN WO200136483-A1.
XX
PD 25-MAY-2001.
XX
PF 15-NOV-2000; 2000WO-GB04354.
XX
PR 15-NOV-1999; 99GB-0026968.
XX
PA (UNLO) UNIV COLLEGE LONDON.
XX
PI Goldspink G, Johnson I;
XX
DR WPI; 2001-355620/37.
DR N-PSDB; AAD06399.
XX
PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
XX
PS Claim 4; Page 52; 66pp; English.
XX
CC The present invention relates to use of mechano-growth factor (MGF),
CC an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
CC medicament for the treatment of neurological disorder. The MGF is capable
CC of reducing motoneurone loss by 20% or greater in response to nerve
CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurones and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurones, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease.
CC The present sequence is rat IGF-I isoform MGF. MGF is a muscle
CC isoform having extracellular (Ec) domain, hence also referred as
CC IGF-I-Ec. The MGF protein comprises amino acid sequences encoded by
CC nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
CC of MGF.
XX
SQ Sequence 111 AA;

Query Match 82.7%; Score 494.5; DB 22; Length 111;
Best Local Similarity 85.6%; Pred. No. 1.7e-43;
Matches 95; Conservative 2; Mismatches 13; Indels 1; Gaps 1;

Qy	1	GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY	60
Db	1	GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY	60
Qy	61	CAPLKPAAKSARSVAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK	110
		:	
Db	61	CVRKCKPTKSARSIAORHTDMPKTOKSPLSTHKKRKLORRRKGSTLEEHK	111

RESULT 9

AAU10560

ID AAU10560 standard; Protein; 111 AA.

XX

AC AAU10560;

XX

DT 25-FEB-2002 (first entry)

XX

DE Rat mechano-growth factor (MGF) polypeptide.

XX

KW Rat; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
KW neuroprotective; nerve damage; peripheral nervous system; nerve severing;
KW muscle; neurological disorder; motoneuron loss; motorneuron disorder;
KW nerve avulsion.

XX

OS Rattus sp.

XX

PN WO200185781-A2.

XX

PD 15-NOV-2001.

XX

PF 10-MAY-2001; 2001WO-GB02054.

XX

PR 10-MAY-2000; 2000GB-0011278.

XX

PA (UNLO) UNIV COLLEGE LONDON.

PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.

XX

PI Goldspink G, Terenghi G;

XX

DR WPI; 2002-055585/07.

DR N-PSDB; AAS16878.

XX

PT Use of insulin-like growth factor I (IGF-I) isoform known as
PT mechano-growth factor which is encoded by IGF-I exons 4,5,6 and has
PT ability to reduce motoneuron loss in response to nerve avulsion, to
PT treat nerve damage -

XX

PS Claim 11; Fig 6; 65pp; English.

XX

CC The invention relates to the use of an insulin-like growth factor I
CC (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture
CC of a medicament for treating nerve damage in the peripheral nervous
CC system, or for treating nerve damage by localising MGF at the site of
CC damage. The nerve damage may include severing of a nerve. The treatment
CC may be combined with another treatment (such as a polypeptide growth
CC factor other than MGF) that prevents or diminishes degeneration of the
CC target organ (for example, muscle) which the damaged nerve innervates,
CC whereby the treatment of the muscle with MGF or a polynucleotide encoding
CC MGF prevents or diminishes degeneration. The method is useful for
CC treating neurological disorders, preferably motorneuron disorders. These
CC methods can reduce motoneuron loss by 20% or greater in response to nerve
CC avulsion. This sequence represents the rat MGF polypeptide.

XX

SQ Sequence 111 AA;

Query Match

82.7%; Score 494.5; DB 23; Length 111;

CC avulsion, and effects motoneurone rescue, preferably adult motoneurone
CC rescue. The MGF polynucleotide and polypeptide are useful in the
CC manufacture of a medicament for the treatment of a neurological disorder,
CC including a disorder of motoneurones and/or neurodegenerative disorder,
CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
CC toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an
CC injury that affects motoneurones, motoneurone loss associated with aging,
CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease.
CC The present sequence is human liver-type IGF-I isoform (L.IGF-I).
CC The L.IGF-I protein comprises amino acid sequences encoded by
CC nucleic acid sequence of IGF-I exons 4 and 6.

XX

SQ Sequence 105 AA;

Query Match 78.3%; Score 468; DB 22; Length 105;
Best Local Similarity 100.0%; Pred. No. 8.8e-41;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRCDLRRLEMY 60

||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRCDLRRLEMY 60

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86

||| ||| ||| ||| ||| ||| ||| |||

Db 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86

RESULT 11

AAU10562

ID AAU10562 standard; Protein; 105 AA.

XX

AC AAU10562;

XX

DT 25-FEB-2002 (first entry)

XX

DE Human insulin-like growth factor I liver-type isoform (L.IGF-I).

XX

KW Human; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
KW neuroprotective; nerve damage; peripheral nervous system; nerve severing;
KW muscle; neurological disorder; motoneuron loss; motorneuron disorder;
KW nerve avulsion; insulin-like growth factor I liver-type isoform; L.IGF-I;

XX

OS Homo sapiens.

XX

PN WO200185781-A2.

XX

PD 15-NOV-2001.

XX

PF 10-MAY-2001; 2001WO-GB02054.

XX

PR 10-MAY-2000; 2000GB-0011278.

XX

PA (UNLO) UNIV COLLEGE LONDON.

PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.

XX
PI Goldspink G, Terenghi G;
XX
DR WPI; 2002-055585/07.
DR N-PSDB; AAS16882.
XX
PT Use of insulin-like growth factor I (IGF-I) isoform known as
PT mechano-growth factor which is encoded by IGF-I exons 4,5,6 and has
PT ability to reduce motoneuron loss in response to nerve avulsion, to
PT treat nerve damage -
XX
PS Disclosure; Fig 8; 65pp; English.
XX
CC The invention relates to the use of an insulin-like growth factor I
CC (IGF-I) isoform, known as mechano-growth factor (MGF), in the manufacture
CC of a medicament for treating nerve damage in the peripheral nervous
CC system, or for treating nerve damage by localising MGF at the site of
CC damage. The nerve damage may include severing of a nerve. The treatment
CC may be combined with another treatment (such as a polypeptide growth
CC factor other than MGF) that prevents or diminishes degeneration of the
CC target organ (for example, muscle) which the damaged nerve innervates,
CC whereby the treatment of the muscle with MGF or a polynucleotide encoding
CC MGF prevents or diminishes degeneration. The method is useful for
CC treating neurological disorders, preferably motoneuron disorders. These
CC methods can reduce motoneuron loss by 20% or greater in response to nerve
CC avulsion. This sequence represents the human insulin-like growth factor I
CC liver-type isoform (L.IGF-I) used in experiments on motoneuron loss.
XX
SQ Sequence 105 AA;

Query Match 78.3%; Score 468; DB 23; Length 105;
Best Local Similarity 100.0%; Pred. No. 8.8e-41;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGI VDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGI VDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86

RESULT 12

AAU09067
ID AAU09067 standard; Protein; 137 AA.
XX
AC AAU09067;

XX
DT 19-DEC-2001 (first entry)
XX
DE Human insulin-like growth factor, IGF1.

XX
KW Human; long-term memory protein; LTM; insulin-like growth factor;
KW neuroleptic; anticonvulsant; nootropic; neuroprotective; IGF1;
KW cerebroprotective; drug discovery; therapeutic profiling;
KW learning disability; memory impairment; brain injury; epilepsy;

KW mental retardation; senile dementia; Alzheimer's disease.
XX
OS Homo sapiens.
XX
PN WO200174298-A2.
XX
PD 11-OCT-2001.
XX
PF 02-APR-2001; 2001WO-US10661.
XX
PR 31-MAR-2000; 2000US-193614P.
XX
PA (UYBR-) UNIV BROWN RESEACH FOUND.
PA (HUGH-) HUGHES HOWARD MED INST.
XX
PI Alberini CM, Bear MF;
XX
DR WPI; 2001-626335/72.
DR N-PSDB; AAS14695.
XX
PT Regulating memory consolidation in an animal comprising treating with
PT an agent that modulates activity of one or more genes from zif268,
PT insulin-like growth factor, glutamate receptor 2, c/EBPbeta and VGF -
XX
PS Disclosure; Page 90-91; 100pp; English.
XX
CC The invention relates to modulating long term memory consolidation in an
CC animal comprises treating with an agent that modulates the activity of
CC one or more of genes from zif268, insulin-like growth factor (IGF),
CC glutamate receptor 1 (GluR1), glutamate receptor 2 (Glur2), c/EBPbeta
CC and neuroendocrine VGF (neurotropin-inducible gene). The method is useful
CC for identifying an agent which modulates memory consolidation. The method
CC is useful for conducting a drug and/or target discovery business, which
CC comprises conducting therapeutic profiling of the agents (or their
CC analogues) identified, for efficacy and toxicity in animals, and
CC formulating a pharmaceutical preparation including one or more agents
CC identified as having an acceptable therapeutic profile and/or licensing
CC to a third party the rights for further drug development of the
CC identified agents. The method of conducting drug discovery business
CC further comprises an additional step of establishing a distribution
CC system for distributing the preparation for sale and may optionally
CC include establishing a sales group for marketing the preparation. A
CC pharmaceutical composition containing the agent is useful for enhancing
CC memory consolidation in an animal, or for augmenting learning and memory,
CC or otherwise for enhancing the functional performance of central nervous
CC system neurons, where the agent is a cAMP elevating agent (agonist)
CC preferably a cAMP analogue or cAMP phosphodiesterase inhibitor, which
CC activates adenylate cyclase. The composition is useful for treating
CC diseases associated with learning disabilities, memory impairment e.g.
CC due to toxicant exposure, brain injury, epilepsy, mental retardation in
CC children and senile dementia, including Alzheimer's disease. The
CC present sequence represents human insulin-like growth factor, IGF1.
XX
SQ Sequence 137 AA;

Query Match 78.3%; Score 468; DB 22; Length 137;
Best Local Similarity 100.0%; Pred. No. 1.2e-40;

Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRCDLRRLEMY 92
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| |||
Db 93 CAPLKPAKSARSVRAQRHTDMPKTQK 118

RESULT 13

AAR83803

ID AAR83803 standard; protein; 153 AA.

XX

AC AAR83803;

XX

DT 15-FEB-1996 (first entry)

XX

DE Insulin-like growth factor 1.

XX

KW Insulin-like growth factor 1 receptor; IGF-1; synthetic peptide; cancer;
KW autophosphorylation; cellular growth; proliferation; restenosis; asthma;
KW burn; wound; brain metastasis.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers
FT Peptide 49..118
FT /label= mature peptide
FT Domain 49..77
FT /label= B domain
FT Domain 78..89
FT /label= C domain
FT Domain 90..110
FT /label= A domain
FT Domain 111..118
FT /label= D domain

XX

PN WO9516703-A1.

XX

PD 22-JUN-1995.

XX

PF 15-DEC-1994; 94WO-US14576.

XX

PR 15-DEC-1993; 93US-0167653.

XX

PA (UYJE-) UNIV JEFFERSON THOMAS.

XX

PI Baserga R, Jameson BA;

XX

DR WPI; 1995-231515/30.

XX

PT New synthetic IGF-1 analogues comprising 5-25 amino acids - useful
PT in treatment of diseases associated with undesirable cell
PT proliferation

XX

PS Disclosure; Page 20-21; 28pp; English.

XX

CC The amino acid sequence of the insulin-like growth factor 1 pre-protein.
CC Processing of the protein results in a 70 amino acid mature protein. The
CC mature protein is split into 4 domains: the B domain has strong homology
CC to the B chain of insulin, the A domain similarly has homology to the A
CC chain of insulin. These domains are separated by a C domain and the
CC mature protein is terminated by a D domain at the C-terminus. The D
CC domain sequence was used to synthesis peptides (AAR83801-2) that
CC include amino acid residues 60-64 of the mature IGF-1 protein. IGF-1
CC binds to the IGF-1 receptor (IGF-1R) via the D domain and induces
CC activation of the IGF-1R by autophosphorylation of the IGF-1R.
CC Activated IGF-1R is associated with cellular growth and proliferation.
CC The synthetic peptides are useful as inhibitors of IGF-1 binding to
CC IGF-1R and thus may be used in the treatment of disorders characterised
CC by undesirable cell proliferation eg. cancer, restenosis, asthma, burns,
CC wounds or brain metastases.

XX

SQ Sequence 153 AA;

Query Match 78.3%; Score 468; DB 16; Length 153;
Best Local Similarity 100.0%; Pred. No. 1.3e-40;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
||| ||||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134

RESULT 14

AAW69733

ID AAW69733 standard; Protein; 153 AA.

XX

AC AAW69733;

XX

DT 26-OCT-1998 (first entry)

XX

DE Human IGF-1.

XX

KW Human; IGF-1; insulin-like growth factor 1; urinary incontinence;
KW gene therapy; neurotrophic factor.

XX

OS Homo sapiens.

XX

PN WO9833529-A1.

XX

PD 06-AUG-1998.

XX

PF 04-FEB-1998; 98WO-US02051.

XX

PR 04-FEB-1997; 97US-0036862.

XX

PA (GENE-) GENEMEDICINE INC.

XX
PI Coleman M;
XX
DR WPI; 1998-437184/37.
DR N-PSDB; AAV50425.
XX
PT Treatment of urinary incontinence - by delivering nucleic acid
PT vector for expression of growth factor or neurotrophic factor in
PT tissue(s)

XX
PS Claim 12d; Page 108-109; 117pp; English.

XX
CC A method has been developed of treating urinary incontinence (UI) in
CC mammals. The method comprises delivering a nucleic acid vector for the
CC expression of a growth factor or neurotrophic factor in a tissue or
CC tissues. The present sequence represents human IGF-1 (insulin-like
CC growth factor 1) which is used in the method of the invention. Due to
CC the growth and stimulatory effects of growth factors and neurotrophic
CC factors, introducing these factors to degenerated muscles in the
CC urinary system can improve UI by enhancing both their integrity and
CC neural innervation.

XX
SQ Sequence 153 AA;

Query Match 78.3%; Score 468; DB 19; Length 153;
Best Local Similarity 100.0%; Pred. No. 1.3e-40;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 49 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108
Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQK 86
Db 109 CAPLKPAKSAR SVRAQRHTDMPKTQK 134

RESULT 15

AAW57882

ID AAW57882 standard; Protein, 153 AA.

XX

AC AAW57882;

XX

DT 23-SEP-1998 (first entry)

XX

DE Human IGF-I protein.

XX

KW IGF-I; insulin-like growth factor I; skeletal alpha-actin gene promoter;
KW muscle atrophy; diabetes; osteoporosis; growth disorder; therapy; AIDS;
KW Chacot-marie-tooth disease; atherogenesis; haemophilia; neuropathy.

XX

OS Homo sapiens.

XX

PN WO9824922-A1.

XX

PD 11-JUN-1998.

XX

PF 01-DEC-1997; 97WO-US21852.

xx

PR 19-NOV-1997; 97US-0974572.

PR 02-DEC-1996; 96US-0031539.

xx

PA (BAYU) BAYLOR COLLEGE MEDICINE.

PA (GENE-) GENEMEDICINE INC.

xx

PI Coleman M, Demayo FJ, Schwartz R;

xx

DR WPI; 1998-333339/29.

DR N-PSDB; AAV40793, AAV40794.

XX

PT New vector for expression of insulin-like growth factor-I - .

PT containing a skeletal alpha-actin gene promoter, IGF-I coding

PT sequences and a 3' region from growth hormone 3'-UTR

XX

PS Disclosure; Fig 13; 115pp; English.

XX

This sequence is the human insulin-like growth factor I (IGF-I). The DNA can be used in the vector of the invention, for expression of a nucleic acid sequence in a cell, which comprises: (a) a nucleic acid cassette containing a sequence encoding IGF-I; (b) a 5' flanking region including one or more sequences necessary for expression of the nucleic acid cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the linker having a position for inserting the nucleic acid cassette, and lacking the coding sequence of a gene with which it is naturally associated; and (d) a 3' flanking region, including a 3' untranslated region or a 3' non coding region or both, where the 3' flanking region is 3' to the position for inserting the nucleic acid cassette and comprises a sequence from a growth hormone 3'-UTR. The vector can provide for efficient IGF-I expression, particularly in gene therapy. It can be used for the delivery of IGF-I for treating diseases such as muscle atrophy, diabetes, neuropathy, osteoporosis, and growth disorders. They can be used for treating peripheral neuropathies resulting from diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Chacot-marie-tooth disease, AIDS, atherogenesis, atherosclerotic, cardiovascular, cerebrovascular, or peripheral vascular disease, haemophilia, inflammation and side-effects from anti-cancer and anti-viral drugs. The vectors can also be used to create transgenic animals for research or livestock improvement.

xx

SQ Sequence 153 AA;

Query Match 78.3%; Score 468; DB 19; Length 153;

Best Local Similarity 100.0%; Pred. No. 1.3e-40;

Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLEMY 60

Db 49 GPETLCGAELVDALQFVCGDRCFYFNKPOTGYGSSSRRAPOTGI VDECCFRSCDLRRILEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86

||||| ||||| ||||| ||||| |||||

Search completed: December 12, 2003, 16:37:15
Job time : 36.1205 secs

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OM protein - protein search, using sw model

Run on: December 12, 2003, 16:35:22 ; Search time 14.247 Seconds
(without alignments)
326.679 Million cell updates/sec

Title: US-09-852-261-2

Perfect score: 598

Sequence: 1 GPETLCGAEVLVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued_Patents_AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result	Query					Description
No.	Score	Match	Length	DB	ID	
1	572.5	95.7	121	3	US-09-142-583A-4	Sequence 4, Appl
2	468	78.3	137	1	US-07-953-230A-10	Sequence 10, Appl
3	468	78.3	152	3	US-08-950-720A-9	Sequence 9, Appl
4	468	78.3	153	1	US-08-219-878A-1	Sequence 1, Appl
5	468	78.3	153	5	PCT-US93-04329-1	Sequence 1, Appl
6	468	78.3	156	3	US-09-142-583A-11	Sequence 11, Appl
7	461	77.1	119	6	5405942-1	Patent No. 5405942
8	457.5	76.5	191	3	US-08-989-251-41	Sequence 41, Appl
9	457.5	76.5	191	3	US-09-340-250-41	Sequence 41, Appl
10	457.5	76.5	191	4	US-09-528-108-41	Sequence 41, Appl
11	412	68.9	78	2	US-08-460-890A-47	Sequence 47, Appl

12	412	68.9	78	3	US-08-167-641C-47	Sequence 47, Appl
13	412	68.9	78	3	US-08-460-971A-47	Sequence 47, Appl
14	412	68.9	78	3	US-08-462-040-47	Sequence 47, Appl
15	398	66.6	176	1	US-07-953-230A-9	Sequence 9, Appl
16	386	64.5	953	4	US-09-255-829-14	Sequence 14, Appl
17	385	64.4	70	1	US-07-947-035-1	Sequence 1, Appl
18	385	64.4	70	1	US-07-776-272-17	Sequence 17, Appl
19	385	64.4	70	1	US-07-958-903A-17	Sequence 17, Appl
20	385	64.4	70	1	US-08-462-018-17	Sequence 17, Appl
21	385	64.4	70	1	US-08-823-245-17	Sequence 17, Appl
22	385	64.4	70	1	US-08-482-271-1	Sequence 1, Appl
23	385	64.4	70	3	US-09-080-120A-1	Sequence 1, Appl
24	385	64.4	70	3	US-08-432-517-1	Sequence 1, Appl
25	385	64.4	70	4	US-07-963-329A-1	Sequence 1, Appl
26	385	64.4	70	4	US-09-477-924-1	Sequence 1, Appl
27	385	64.4	70	4	US-09-723-981-1	Sequence 1, Appl
28	385	64.4	70	4	US-09-723-896-1	Sequence 1, Appl
29	385	64.4	70	5	PCT-US92-09443A-1	Sequence 1, Appl
30	385	64.4	70	5	PCT-US93-11458-1	Sequence 1, Appl
31	385	64.4	70	5	PCT-US95-08925-1	Sequence 1, Appl
32	385	64.4	94	1	US-07-989-845-28	Sequence 28, Appl
33	385	64.4	94	1	US-07-989-844-12	Sequence 12, Appl
34	385	64.4	94	1	US-08-161-044-12	Sequence 12, Appl
35	385	64.4	94	1	US-08-240-121-12	Sequence 12, Appl
36	385	64.4	94	1	US-08-451-241-12	Sequence 12, Appl
37	385	64.4	94	5	PCT-US93-11297-12	Sequence 12, Appl
38	385	64.4	94	5	PCT-US93-11298-28	Sequence 28, Appl
39	385	64.4	118	3	US-09-029-267-14	Sequence 14, Appl
40	385	64.4	155	1	US-08-328-961-8	Sequence 8, Appl
41	385	64.4	155	1	US-08-462-397-8	Sequence 8, Appl
42	385	64.4	155	3	US-08-989-251-39	Sequence 39, Appl
43	385	64.4	155	3	US-09-340-250-39	Sequence 39, Appl
44	385	64.4	155	4	US-09-528-108-39	Sequence 39, Appl
45	382	63.9	70	1	US-08-180-572-5	Sequence 5, Appl

ALIGNMENTS

RESULT 1

US-09-142-583A-4

; Sequence 4, Application US/09142583A

; Patent No. 6221842

; GENERAL INFORMATION:

; APPLICANT: GOLDSPIK, GEOFFREY

; TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS

; NUMBER OF SEQUENCES: 11

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: NIXON & VANDERHYE P.C.

; STREET: 1100 NORTH GLEBE ROAD

; CITY: ARLINGTON

; STATE: VA

; COUNTRY: USA

; ZIP: 22201

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164000
TELEFAX: 7038164100
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 121 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-142-583A-4

Query Match 95.7%; Score 572.5; DB 3; Length 121;
Best Local Similarity 96.4%; Pred. No. 1.8e-60;
Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;
Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 11 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 70
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
Db 71 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKGSTFEEHK 121

RESULT 2

US-07-953-230A-10

Sequence 10, Application US/07953230A
Patent No. 5476779
GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404

; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/953,230A
; FILING DATE: 30-SEP-1992
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Crane-Feury, Sharon E
; REGISTRATION NUMBER: 36,113
; REFERENCE/DOCKET NUMBER: 028755-010
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 137 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: 7
; OTHER INFORMATION: /note= "Gap of 2 after 7."
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: 31
; OTHER INFORMATION: /note= "Gap of 1 after 31."
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: 116
; OTHER INFORMATION: /note= "Gap of 27 after 116."
US-07-953-230A-10

Query Match 78.3%; Score 468; DB 1; Length 137;
Best Local Similarity 100.0%; Pred. No. 5.2e-48;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGI VDECCFRSCDLRRLEMY 60
Db 33 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGI VDECCFRSCDLRRLEMY 92
Qy 61 CAPLKPAKSARS VRAQRHTDMPKTQK 86
Db 93 CAPLKPAKSARS VRAQRHTDMPKTQK 118

RESULT 3

US-08-950-720A-9
; Sequence 9, Application US/08950720A
; Patent No. 6046028
; GENERAL INFORMATION:
; APPLICANT: Conklin, Darrell C.
; APPLICANT: Lofton-Day, Catherine E.

APPLICANT: Lok, Si
APPLICANT: Jaspers, Stephen R.
TITLE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Eastlake Avenue East
CITY: Seattle
STATE: WA
COUNTRY: USA
ZIP: 98102
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/950,720A
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96-09
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
TELEFAX: 206-442-6678
TELEX:
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 152 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 6046028e
US-08-950-720A-9

Query Match 78.3%; Score 468; DB 3; Length 152;
Best Local Similarity 100.0%; Pred. No. 5.9e-48;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGI VDECCFRSCDLRRLEMY 60
Db 23 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGI VDECCFRSCDLRRLEMY 82
Qy 61 CAPLKPAKSARS VRAQRH TDMPKTQK 86
Db 83 CAPLKPAKSARS VRAQRH TDMPKTQK 108

RESULT 4

US-08-219-878A-1
; Sequence 1, Application US/08219878A
; Patent No. 5473054

; GENERAL INFORMATION:
; APPLICANT: Bradford A. Jameson and Renato Baserga
; TITLE OF INVENTION: IGF-1 Analogs
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Woodcock Washburn
; ADDRESSEE: Kurtz Mackiewicz & No. 5473054ris
; STREET: One Liberty Place - 46th Floor
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19103
; COMPUTER READABLE FORM:
; MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: WORDPERFECT 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/219,878A
; FILING DATE: 30-MAR-1994
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/881,524
; FILING DATE: 08-MAY-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Mark DeLuca
; REGISTRATION NUMBER: 33,229
; REFERENCE/DOCKET NUMBER: TJU-1240
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (215) 568-3100
; TELEFAX: (215) 568-3439
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 153
; TYPE: amino acid
; TOPOLOGY: linear
US-08-219-878A-1

Query Match 78.3%; Score 468; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 5.9e-48;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134

RESULT 5

PCT-US93-04329-1

; Sequence 1, Application PC/TUS9304329

; GENERAL INFORMATION:

; APPLICANT: Bradford A. Jameson and Renato Baserga

; TITLE OF INVENTION: IGF-1 Analogs

; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Woodcock Washburn
; ADDRESSEE: Kurtz Mackiewicz & Norris
; STREET: One Liberty Place - 46th Floor
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19103
; COMPUTER READABLE FORM:
; MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: WORDPERFECT 5.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US93/04329
; FILING DATE: 19930507
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/881,524
; FILING DATE: 08-MAY-92,
; ATTORNEY/AGENT INFORMATION:
; NAME: Mark DeLuca
; REGISTRATION NUMBER: 33,229
; REFERENCE/DOCKET NUMBER: TJU-0649
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (215) 568-3100
; TELEFAX: (215) 568-3439
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 153
; TYPE: AMINO ACID
; TOPOLOGY: linear
PCT-US93-04329-1

Query Match 78.3%; Score 468; DB 5; Length 153;
Best Local Similarity 100.0%; Pred. No. 5.9e-48;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRCDLRRLEMY 60
Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRCDLRRLEMY 108
Qy 61 CAPIKPAKSARSVRAQRHTDMPKTQK 86
Db 109 CAPIKPAKSARSVRAQRHTDMPKTQK 134

RESULT 6
US-09-142-583A-11
; Sequence 11, Application US/09142583A
; Patent No. 6221842
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:

ADDRESSEE: NIXON & VANDERHYE P.C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
STATE: VA
COUNTRY: USA
ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164000
TELEFAX: 7038164100
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 156 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11

Query Match 78.3%; Score 468; DB 3; Length 156;
Best Local Similarity 100.0%; Pred. No. 6.1e-48;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 52 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 111
Qy 61 CAPLKPAKSARS VRAQRHTDMPKTQK 86
Db 112 CAPLKPAKSARS VRAQRHTDMPKTQK 137

RESULT 7
5405942-1
; Patent No. 5405942
; APPLICANT: BELL, GRAEME I.; RALL, LESLIE B.; MERRYWEATHER,
; JAMES P.
; TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
; I AND II
; NUMBER OF SEQUENCES: 16

;

CURRENT APPLICATION DATA:

;

APPLICATION NUMBER: US/07/65,673

;

FILING DATE: 16-JUN-1987

;

PRIOR APPLICATION DATA:

;

APPLICATION NUMBER: 630,557

;

FILING DATE: 19-JUL-1984

;

SEQ ID NO:1:

;

LENGTH: 119

5405942-1

Query Match 77.1%; Score 461; DB 6; Length 119;
Best Local Similarity 98.8%; Pred. No. 3e-47;
Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 15 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDHRRLEMY 74
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Qy 61 CAPLKPAKSARS VRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| |||
Db 75 CAPLKPAKSARS VRAQRHTDMPKTQK 100

RESULT 8

US-08-989-251-41

;

Sequence 41, Application US/08989251

;

Patent No. 6017731

;

GENERAL INFORMATION:

;

APPLICANT: Tekamp-Olson, Patricia

;

TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS

;

TITLE OF INVENTION: PROTEINS IN YEAST

;

NUMBER OF SEQUENCES: 41

;

CORRESPONDENCE ADDRESS:

;

ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/989,251

FILING DATE:

CLASSIFICATION:

ATTORNEY/AGENT INFORMATION:

NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4

TELECOMMUNICATION INFORMATION:

TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175

INFORMATION FOR SEQ ID NO: 41:

SEQUENCE CHARACTERISTICS:

; LENGTH: 191 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-989-251-41

Query Match 76.5%; Score 457.5; DB 3; Length 191;
Best Local Similarity 98.9%; Pred. No. 1.4e-46;
Matches 86; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 86 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 145

Qy 61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| |||
Db 146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172

RESULT 9

US-09-340-250-41

; Sequence 41, Application US/09340250

; Patent No. 6083723

; GENERAL INFORMATION:

; APPLICANT: Tekamp-Olson, Patricia

; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS

; TITLE OF INVENTION: PROTEINS IN YEAST

; NUMBER OF SEQUENCES: 41

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP

; STREET: 3605 Glenwood Ave. Suite 310

; CITY: Raleigh

; STATE: NC

; COUNTRY: US

; ZIP: 27622

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/340,250

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/989,251

; FILING DATE:

; ATTORNEY/AGENT INFORMATION:

; NAME: Spruill, W. Murray

; REGISTRATION NUMBER: 32,943

; REFERENCE/DOCKET NUMBER: 5784-4

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 919 420 2202

; TELEFAX: 919 881 3175

; INFORMATION FOR SEQ ID NO: 41:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 191 amino acids

; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-340-250-41

Query Match 76.5%; Score 457.5; DB 3; Length 191;
Best Local Similarity 98.9%; Pred. No. 1.4e-46;
Matches 86; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 86 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 145

Qy 61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| |||
Db 146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172

RESULT 10

US-09-528-108-41

; Sequence 41, Application US/09528108
; Patent No. 6312923
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; TITLE OF INVENTION: PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/528,108
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/989,251
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 41:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 191 amino acids
; TYPE: amino acid

; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-528-108-41

Query Match 76.5%; Score 457.5; DB 4; Length 191;
Best Local Similarity 98.9%; Pred. No. 1.4e-46;
Matches 86; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 86 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 145
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Qy 61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172

RESULT 11

US-08-460-890A-47

; Sequence 47, Application US/08460890A
; Patent No. 5994109

; GENERAL INFORMATION:

; APPLICANT: Woo, Savio L.C.
; APPLICANT: Smith, Louis C.
; APPLICANT: Cristiano, Richard J.
; APPLICANT: Gottchalk, Stephen

; TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
; TITLE OF INVENTION: METHODS OF USE

; NUMBER OF SEQUENCES: 65

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Lyon & Lyon
; STREET: 633 West Fifth Street
; STREET: Suite 4700
; CITY: Los Angeles
; STATE: California
; COUNTRY: U.S.A.
; ZIP: 90071-2066

; COMPUTER READABLE FORM:

; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; MEDIUM TYPE: storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: IBM P.C. DOS 5.0
; SOFTWARE: FastSEQ for Windows 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/460,890A
; FILING DATE: June 5, 1995

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/167,641
; FILING DATE: December 14, 1993
; APPLICATION NUMBER: 07/855,389
; FILING DATE: March 20, 1992
; APPLICATION NUMBER: PCT/US93/02725
; FILING DATE: March 19, 1993

; ATTORNEY/AGENT INFORMATION:

; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327

; REFERENCE/DOCKET NUMBER: 212/066
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 47:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 78 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-460-890A-47

Query Match 68.9%; Score 412; DB 2; Length 78;
Best Local Similarity 97.4%; Pred. No. 1.1e-41;
Matches 75; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Qy 4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 63
|:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 61
Qy 64 LKPAKSARSARVRAQRHTD 80
|:||:|||||:|||||:
Db 62 LRPARSARSARVRAQRHTD 78

RESULT 12

US-08-167-641C-47

; Sequence 47, Application US/08167641C

; Patent No. 6033884

; GENERAL INFORMATION:

; APPLICANT: Woo, Savio L.C.

; APPLICANT: Smith, Louis C.

; APPLICANT: Cristiano, Richard J.

; APPLICANT: Gottchalk, Stephen

; TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND

; TITLE OF INVENTION: METHODS OF USE

; NUMBER OF SEQUENCES: 65

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Lyon & Lyon

; STREET: 633 West Fifth Street

; STREET: Suite 4700

; CITY: Los Angeles

; STATE: California

; COUNTRY: U.S.A.

; ZIP: 90071-2066

; COMPUTER READABLE FORM:

; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb

; MEDIUM TYPE: storage

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: IBM P.C. DOS 5.0

; SOFTWARE: FastSEQ for Windows 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/167,641C

; FILING DATE: December 14, 1993

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/855,389
; FILING DATE: March 20, 1992
; APPLICATION NUMBER: PCT/US93/02725
; FILING DATE: March 19, 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 205/012
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 47:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 78 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide

US-08-167-641C-47

Query Match 68.9%; Score 412; DB 3; Length 78;
Best Local Similarity 97.4%; Pred. No. 1.1e-41;
Matches 75; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Qy 4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 63
Db 2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 61
Qy 64 LKPAKSARSVRQRHTD 80
Db 62 LRPARSARSVRQRHTD 78

RESULT 13

US-08-460-971A-47

; Sequence 47, Application US/08460971A
; Patent No. 6150168
; GENERAL INFORMATION:
; APPLICANT: Woo, Savio L.C.
; APPLICANT: Smith, Louis C.
; APPLICANT: Cristiano, Richard J.
; APPLICANT: Gottchalk, Stephen
; TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
; TITLE OF INVENTION: METHODS OF USE
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Lyon & Lyon
; STREET: 633 West Fifth Street
; STREET: Suite 4700
; CITY: Los Angeles
; STATE: California
; COUNTRY: U.S.A.
; ZIP: 90071-2066
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb

;
; MEDIUM TYPE: storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: IBM P.C. DOS 5.0
; SOFTWARE: FastSEQ for Windows 2.0
;
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/460,971A
; FILING DATE: June 5, 1995
; CLASSIFICATION: 435
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/167,641
; FILING DATE: December 14, 1993
; APPLICATION NUMBER: 07/855,389
; FILING DATE: March 20, 1992
; APPLICATION NUMBER: PCT/US93/02725
; FILING DATE: March 19, 1993
;
; ATTORNEY/AGENT INFORMATION:
; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 212/063
;
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
;
; INFORMATION FOR SEQ ID NO: 47:
;
; SEQUENCE CHARACTERISTICS:
; LENGTH: 78 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
;
; MOLECULE TYPE: peptide
US-08-460-971A-47

Query Match 68.9%; Score 412; DB 3; Length 78;
Best Local Similarity 97.4%; Pred. No. 1.1e-41;
Matches 75; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 63
|:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 61

Qy 64 LKPAKSARSVRQRHTD 80
|:||:|||||:|||||:
Db 62 LRPARSARSVRQRHTD 78

RESULT 14

US-08-462-040-47

; Sequence 47, Application US/08462040

; Patent No. 6177554

; GENERAL INFORMATION:

; APPLICANT: Woo, Savio L.C.

; APPLICANT: Smith, Louis C.

; APPLICANT: Cristiano, Richard J.

; APPLICANT: Gottchalk, Stephen

; TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND

; TITLE OF INVENTION: METHODS OF USE

; NUMBER OF SEQUENCES: 65

; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Lyon & Lyon
; STREET: 633 West Fifth Street
; STREET: Suite 4700
; CITY: Los Angeles
; STATE: California
; COUNTRY: U.S.A.
; ZIP: 90071-2066
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; MEDIUM TYPE: storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: IBM P.C. DOS 5.0
; SOFTWARE: FastSEQ for Windows 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/462,040
; FILING DATE: June 5, 1995
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/167,641
; FILING DATE: December 14, 1993
; APPLICATION NUMBER: 07/855,389
; FILING DATE: March 20, 1992
; APPLICATION NUMBER: PCT/US93/02725
; FILING DATE: March 19, 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Warburg, Richard J.
; REGISTRATION NUMBER: 32,327
; REFERENCE/DOCKET NUMBER: 212/078
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (213) 489-1600
; TELEFAX: (213) 955-0440
; TELEX: 67-3510
; INFORMATION FOR SEQ ID NO: 47:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 78 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide

US-08-462-040-47

Query Match 68.9%; Score 412; DB 3; Length 78;
Best Local Similarity 97.4%; Pred. No. 1.1e-41;
Matches 75; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Qy 4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 63
Db 2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMYCAP 61
Qy 64 LKPAKSARSVRQRHTD 80
Db 62 LRPARSARSVRQRHTD 78

RESULT 15
US-07-953-230A-9

; Sequence 9, Application US/07953230A
; Patent No. 5476779
; GENERAL INFORMATION:
; APPLICANT: CHEN, Thomas T
; APPLICANT: SHAMBLOTT, Michael J
; TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
; TITLE OF INVENTION: FROM RAINBOW TROUT
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Burns, Doane, Swecker & Mathis
; STREET: George Mason Bldg., Washington & Prince Sts.
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: United States
; ZIP: 22313-1404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/953,230A
; FILING DATE: 30-SEP-1992
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Crane-Feury, Sharon E
; REGISTRATION NUMBER: 36,113
; REFERENCE/DOCKET NUMBER: 028755-010
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703) 836-6620
; TELEFAX: (703) 836-2021
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 176 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-953-230A-9

Query Match 66.6%; Score 398; DB 1; Length 176;
Best Local Similarity 62.8%; Pred. No. 1.4e-39;
Matches 76; Conservative 10; Mismatches 19; Indels 16; Gaps 1;

Qy	1	GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY	60
		: : : : : : :	
Db	45	GPETLCGAEVLVDLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY	104
		: : : :	
Qy	61	CAPLKPAKSARSVRAQRHTDMPKTQKY-----	104
		QPPSTNKNTKSQRRKGS	
Db	105	CAPVKSGKAARSVRAQRHTDMPRTPKVSTAVQSVDRGTERRTAQHPDCKPKKEVHQKNS	164
Qy	105	T 105	
		:	
Db	165	S 165	

Search completed: December 12, 2003, 16:41:14
Job time : 16.247 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: December 12, 2003, 16:34:56 ; Search time 11.5964 Seconds
(without alignments)
912.229 Million cell updates/sec

Title: US-09-852-261-2

Perfect score: 598

Sequence: 1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283308 seqs, 96168682 residues

Total number of hits satisfying chosen parameters: 283308

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR_76:*

1: pirl:*

2: pir2:*

3: pir3:*

4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query				Description
		Match	Length	DB	ID	
1	560	93.6	195	1	IGHU1B	insulin-like growt
2	521.5	87.2	159	2	A26859	insulin-like growt
3	503.5	84.2	133	2	A40912	insulin-like growt
4	494	82.6	181	2	A27804	insulin-like growt
5	468	78.3	137	1	IGGP1	insulin-like growt
6	468	78.3	137	2	A36552	insulin-like growt
7	468	78.3	153	1	IGHU1	insulin-like growt
8	464.5	77.7	153	2	S12825	insulin-like growt
9	463	77.4	122	2	PN0622	insulin-like growt
10	463	77.4	153	1	IGBO1	insulin-like growt
11	459	76.8	154	2	JC2483	insulin-like growt
12	455	76.1	138	2	S22878	insulin-like growt
13	455	76.1	154	2	A33390	insulin-like growt

14	450	75.3	153	2	B27804	insulin-like growth
15	447	74.7	127	2	A25540	insulin-like growth
16	432	72.2	127	2	B40912	insulin-like growth
17	422	70.6	153	2	A41399	insulin-like growth
18	419.5	70.2	153	2	A36079	insulin-like growth
19	403.5	67.5	161	2	C54270	insulin-like growth
20	401	67.1	155	2	C44012	insulin-like growth
21	401	67.1	176	2	A41396	insulin-like growth
22	401	67.1	188	2	A54270	insulin-like growth
23	401	67.1	188	2	B54270	insulin-like growth
24	399	66.7	149	2	D54270	insulin-like growth
25	398	66.6	176	2	A46244	insulin-like growth
26	298.5	49.9	126	2	S66485	insulin-like growth
27	293	49.0	193	2	A53697	insulin-like growth
28	264.5	44.2	214	2	B46244	insulin-like growth
29	248.5	41.6	187	2	T10897	insulin-like growth
30	241	40.3	179	2	S04858	insulin-like growth
31	235	39.3	128	2	I57671	insulin-like growth
32	235	39.3	155	1	IGBO2	insulin-like growth
33	233	39.0	180	2	A24913	insulin-like growth
34	231	38.6	180	1	IGHU2	insulin-like growth
35	229.5	38.4	180	1	IGRT2	insulin-like growth
36	228.5	38.2	93	2	I53642	insulin-like growth
37	228	38.1	181	2	B60738	insulin-like growth
38	225.5	37.7	183	2	S02423	insulin-like growth
39	219.5	36.7	139	2	A38612	insulin-like growth
40	219.5	36.7	183	2	I67610	insulin-like growth
41	212.5	35.5	79	2	I51240	insulin-like growth
42	207	34.6	210	2	S66484	insulin-like growth
43	200	33.4	66	2	A60740	insulin-like growth
44	178	29.8	44	2	A34049	insulin-like growth
45	159.5	26.7	50	1	INFIS	insulin - shorthor

ALIGNMENTS

RESULT 1

IGHU1B

insulin-like growth factor I precursor, splice form B [validated] - human

N;Alternate names: IGF-IB; somatomedin C

N;Contains: insulin-like growth factor IB-E1 amide

C;Species: Homo sapiens (man)

C;Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000

C;Accession: A01611; A26181; S30540; B48960; A42664

R;Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.

J. Biol. Chem. 261, 4828-4832, 1986

A;Title: Organization and sequence of the human insulin-like growth factor I gene. Alternative RNA processing produces two insulin-like growth factor I precursor peptides.

A;Reference number: A92581; MUID:86168194; PMID:2937782

A;Accession: A01611

A;Molecule type: DNA

A;Residues: 1-195 <ROT1>

A;Cross-references: GB:M14155; NID:g183106; PIDN:AAA52537.1; PID:g183109

R;Rotwein, P.

Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986

A;Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver.
A;Reference number: A26181; MUID:86094355; PMID:3455760
A;Accession: A26181
A;Molecule type: mRNA
A;Residues: 1-195 <ROT2>
A;Cross-references: GB:M11568; NID:g183111; PIDN:AAA52539.1; PID:g183112
R;Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A;Description: Nucleotide sequence of the human fetal brain IGF-1b.
A;Reference number: S30540
A;Accession: S30540
A;Molecule type: mRNA
A;Residues: 1-195 <SAN>
A;Cross-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
R;Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von
Holst, H.; Sara, V.
Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of insulin-like growth factor 1 in human primary brain
tumors.
A;Reference number: A48960; MUID:93265440; PMID:8495408
A;Accession: B48960
A;Molecule type: mRNA
A;Residues: 1-195 <SA2>
A;Cross-references: GB:X56774; GB:S61860; NID:g32991; PIDN:CAA40093.1;
PID:g32992
A;Experimental source: anaplastic oligodendrogloma
A;Note: sequence modified after extraction from NCBI backbone
A;Note: the authors translated the codon CAG for residues 124 and 133 as Glu
A;Note: sequence extracted from NCBI backbone (NCBIN:133058)
R;Siegfried, J.M.; Kasprzyk, P.G.; Treston, A.M.; Mulshine, J.L.; Quinn, K.A.;
Cuttitta, F.
Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
A;Title: A mitogenic peptide amide encoded within the E peptide domain of the
insulin-like growth factor IB prohormone.
A;Reference number: A42664; MUID:92390398; PMID:1325646
A;Contents: annotation; IBE-1; amidated carboxyl end
C;Comment: For an alternative splice form, see PIR:IGHU1.
C;Genetics:
A;Gene: GDB:IGF1
A;Cross-references: GDB:120081; OMIM:147440
A;Map position: 12q22-12q24.1
A;Introns: 21/3; 74/1; 134/3
C;Superfamily: insulin
C;Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-48/Domain: propeptide #status predicted <PRO>
F;49-118/Product: insulin-like growth factor I #status predicted <MAT>
F;49-77/Domain: insulin chain B-like #status predicted <CHB>
F;78-89/Domain: insulin connecting C peptide-like #status predicted <CHC>
F;90-110/Domain: insulin chain A-like #status predicted <CHA>
F;111-118/Domain: D peptide #status predicted <CHD>
F;119-195/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
<CHE>
F;151-172/Product: insulin-like growth factor IB-E1 amide #status predicted
<MA2>
F;54-96,66-109,95-100/Disulfide bonds: #status predicted

F;172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following glycine) #status predicted

Query Match 93.6%; Score 560; DB 1; Length 195;
Best Local Similarity 100.0%; Pred. No. 5.3e-51;
Matches 103; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 103
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 109 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 151

RESULT 2

A26859

insulin-like growth factor IB precursor - rat

C;Species: Rattus norvegicus (Norway rat)

C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999

C;Accession: A26859

R;Shimatsu, A.; Rotwein, P.

Nucleic Acids Res. 15, 7196, 1987

A;Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the 5' untranslated region.

A;Reference number: A26859; MUID:88015572; PMID:3658684

A;Accession: A26859

A;Molecule type: mRNA

A;Residues: 1-159 <SHI>

A;Cross-references: GB:X06107; GB:M32260; GB:Y00429; NID:g56424;

PIDN:CAA29480.1; PID:g56425

C;Superfamily: insulin

C;Keywords: alternative splicing; growth factor

Query Match 87.2%; Score 521.5; DB 2; Length 159;
Best Local Similarity 89.2%; Pred. No. 4.5e-47;
Matches 99; Conservative 2; Mismatches 9; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
||| ||| ||| :||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 109 CAPLKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRKGSTLEEHK 159

RESULT 3

A40912

insulin-like growth factor I precursor form 1 - rat

C;Species: Rattus norvegicus (Norway rat)

C;Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999

C;Accession: A40912

R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987

Qy	1	GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY	60
Db	49	GPETLCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY	108
Qy	61	CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEEH	109
Db	109	CAPLKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGESKAH	157

RESULT 5

IGGP1

insulin-like growth factor I precursor - guinea pig

C;Species: Cavia porcellus (guinea pig)

C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997

C;Accession: S12719

R;Bell, G.I.; Stempien, M.M.; Fong, N.M.; Seino, S.

Nucleic Acids Res. 18, 4275, 1990

A;Title: Sequence of a cDNA encoding guinea pig IGF-I.

A;Reference number: S12719; MUID:90332447; PMID:2377480

A;Accession: S12719

A;Molecule type: mRNA

A;Residues: 1-137 <BEL>

A;Cross-references: EMBL:X52951

A;Note: it is uncertain whether Met-1 or Met-8 is the initiator

C;Superfamily: insulin

C;Keywords: glycoprotein; growth factor; plasma

F;1-32/Domain: signal sequence #status predicted <SIG>

F;33-102/Product: insulin-like growth factor I #status predicted <MAT>

F;33-61/Domain: insulin chain B-like #status predicted <CHB>

F;62-73/Domain: insulin connecting C peptide-like #status predicted <CHC>

F;74-94/Domain: insulin chain A-like #status predicted <CHA>

F;95-102/Domain: D peptide #status predicted <CHD>

F;103-137/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>

F;124/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 78.3%; Score 468; DB 1; Length 137;
 Best Local Similarity 100.0%; Pred. No. 1.5e-41;
 Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY	60

Db	33	GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY	92
----	----	--	----

Qy	61	CAPLKPAKSARSVRAQRHTDMPKTQK	86

Db	93	CAPLKPAKSARSVRAQRHTDMPKTQK	118
----	----	----------------------------	-----

RESULT 6

A36552

insulin-like growth factor 1a precursor - human

C;Species: Homo sapiens (man)

C;Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999

C;Accession: A36552

R;Tobin, G.; Yee, D.; Bruenner, N.; Rotwein, P.

Mol. Endocrinol. 4, 1914-1920, 1990

A;Title: A novel human insulin-like growth factor I messenger RNA is expressed in normal and tumor cells.
A;Reference number: A36552; MUID:91187000; PMID:2082190
A;Accession: A36552
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-137 <TOB>
A;Cross-references: GB:M37484; NID:g184833; PIDN:AAA52789.1; PID:g184834
C;Superfamily: insulin

Query Match 78.3%; Score 468; DB 2; Length 137;
Best Local Similarity 100.0%; Pred. No. 1.5e-41;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 33 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 92

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| |||
Db 93 CAPLKPAKSARSVRAQRHTDMPKTQK 118

RESULT 7

IGHU1

insulin-like growth factor I precursor, splice form A [validated] - human
N;Alternate names: IGF-I long splice form precursor; IGF-IA; somatomedin C

C;Species: Homo sapiens (man)

C;Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A92581; A23614; A93321; JT0571; A23622; A92226; A60483; S30519;
A48960; I57044; A01610

R;Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986

A;Title: Organization and sequence of the human insulin-like growth factor I gene. Alternative RNA processing produces two insulin-like growth factor I precursor peptides.

A;Reference number: A92581; MUID:86168194; PMID:2937782

A;Accession: A92581

A;Molecule type: DNA

A;Residues: 1-153 <ROT>

A;Cross-references: GB:M14156; NID:g183107; PIDN:AAA52538.1; PID:g183110

R;de Pagter-Holthuizen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bouma, B.N.; Jansen, M.; Sussenbach, J.S.

FEBS Lett. 195, 179-184, 1986

A;Title: Organization of the human genes for insulin-like growth factors I and II.

A;Reference number: A91356; MUID:86108862; PMID:3002851

A;Accession: A23614

A;Molecule type: DNA

A;Residues: 24-153 <DEP>

A;Cross-references: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1;
PID:g33021; GB:X03421; NID:g33024; PID:g755741; GB:X03422; NID:g33027;
PID:g1335141

R;Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.;
Gabbay, K.H.; Nussbaum, A.L.; Sussenbach, J.S.; Van den Brande, J.L.

Nature 306, 609-611, 1983

A;Title: Sequence of cDNA encoding human insulin-like growth factor I precursor.

A;Reference number: A93321; MUID:84068210; PMID:6358902
A;Accession: A93321
A;Molecule type: mRNA
A;Residues: 1-153 <JAN>
A;Cross-references: GB:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
A;Note: Met-24 is proposed as a likely initiator
R;Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
Biochem. Biophys. Res. Commun. 175, 507-514, 1991
A;Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
A;Reference number: JT0571; MUID:91207342; PMID:2018498
A;Accession: JT0571
A;Molecule type: mRNA
A;Residues: 1-153 <STE>
A;Cross-references: EMBL:X57025; NID:g33007; PIDN:CAA40342.1; PID:g33008
R;Le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P.
FEBS Lett. 196, 108-112, 1986
A;Title: Complete characterization of the human IGF-I nucleotide sequence isolated from a newly constructed adult liver cDNA library.
A;Reference number: A23622; MUID:86108910; PMID:2935423
A;Accession: A23622
A;Molecule type: mRNA
A;Residues: 1-153 <LEB>
A;Cross-references: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927
R;Rinderknecht, E.; Humbel, R.E.
J. Biol. Chem. 253, 2769-2776, 1978
A;Title: The amino acid sequence of human insulin-like growth factor I and its structural homology with proinsulin.
A;Reference number: A92226; MUID:78130171; PMID:632300
A;Accession: A92226
A;Molecule type: protein
A;Residues: 49-118 <RIN>
R;Karey, K.P.; Marquardt, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
A;Title: Human platelet-derived mitogens. Identification of insulinlike growth factors I and II by purification and N(alpha) amino acid sequence analysis.
A;Reference number: A60483; MUID:89323462; PMID:2752153
A;Accession: A60483
A;Molecule type: protein
A;Residues: 49-53,'X',55-65,'X',67-75 <KAR>
A;Experimental source: platelet lysate
R;Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A;Description: Nucleotide sequence of the human fetal brain IGF-1a.
A;Reference number: S30519
A;Accession: S30519
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-153 <NOR>
A;Cross-references: EMBL:X56773; NID:g32989; PIDN:CAA40092.1; PID:g32990
R;Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.; Sara, V.
Cancer Res. 53, 2475-2478, 1993
A;Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
A;Reference number: A48960; MUID:93265440; PMID:8495408

A;Accession: A48960
A;Molecule type: mRNA
A;Residues: 1-123, 'E', 125-132, 'E', 134-153 <SAN>
A;Cross-references: GB:X56773; GB:S61841; NID:g32989
A;Experimental source: anaplastic oligodendrogloma
A;Note: sequence extracted from NCBI backbone (NCBIN:133056, NCBIP:133057)
A;Note: sequence inconsistent with the nucleotide translation
R;Rall, L.B.; Scott, J.; Bell, G.I.
Meth. Enzymol. 146, 239-248, 1987
A;Title: Human insulin-like growth factor I and II messenger RNA: isolation of complementary DNA and analysis of expression.
A;Reference number: I57044; MUID:88065102; PMID:3683205
A;Accession: I57044
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 24-153 <RAL>
A;Cross-references: GB:M29644; NID:g183119; PIDN:AAA52543.1; PID:g183120
C;Comment: The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity.
C;Comment: For an alternative splice form, see PIR:IGHU1B.
C;Genetics:
A;Gene: GDB:IGF1
A;Cross-references: GDB:120081; OMIM:147440
A;Map position: 12q22-12q24.1
A;Introns: 21/3; 74/1; 134/3
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor; plasma
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-48/Domain: propeptide #status predicted <PRO>
F;49-118/Product: insulin-like growth factor I #status experimental <MAT>
F;49-77/Domain: insulin chain B-like #status experimental <CHB>
F;78-89/Domain: insulin connecting C peptide-like #status experimental <CHC>
F;90-110/Domain: insulin chain A-like #status experimental <CHA>
F;111-118/Domain: D peptide #status experimental <CHD>
F;119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPRO>
F;54-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 78.3%; Score 468; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 1.6e-41;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134

RESULT 8
S12825
insulin-like growth factor I precursor - pig
N,Alternate names: somatomedin C
C;Species: Sus scrofa domestica (domestic pig)

C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999
C;Accession: S12825; S21488; A34938; A60738
R;Mueller, M.; Brem, G.
Nucleic Acids Res. 18, 364, 1990
A;Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated region, exons 1 and 2 and mRNA.
A;Reference number: S12825; MUID:90221822; PMID:2326169
A;Accession: S12825
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-153 <MUE>
A;Cross-references: EMBL:X52388
R;Dickson, M.C.; Huskisson, N.S.; Gilmour, R.S.
submitted to the EMBL Data Library, November 1989
A;Description: Porcine Insulin-like growth factor gene: sequence of exon and 5' non-coding region.
A;Reference number: S21488
A;Accession: S21488
A;Molecule type: DNA
A;Residues: 1-21 <DIC>
A;Cross-references: EMBL:X17638; NID:g1995; PIDN:CAA35632.1; PID:g1996
R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endocrinol. 2, 674-681, 1988
A;Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic acid cloning and uterine expression of messenger ribonucleic acid encoding evolutionarily conserved IGF-I peptides.
A;Reference number: A34938; MUID:89096956; PMID:3211153
A;Accession: A34938
A;Molecule type: mRNA
A;Residues: 'Y', 21-153 <TAV>
A;Cross-references: GB:M31175
R;Francis, G.L.; Owens, P.C.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.
J. Endocrinol. 122, 681-687, 1989
A;Title: Purification, amino acid sequences and assay cross-reactivities of porcine insulin-like growth factor-I and -II.
A;Reference number: A60738; MUID:90039035; PMID:2809477
A;Accession: A60738
A;Molecule type: protein
A;Residues: 49-117, 'X' <FRAs>
C;Genetics:
A;Introns: 21/3; 74/1
C;Superfamily: insulin
C;Keywords: growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-48/Domain: propeptide #status predicted <PRO>
F;49-153/Product: insulin-like growth factor IA #status experimental <MAT>

Query Match 77.7%; Score 464.5; DB 2; Length 153;
Best Local Similarity 87.3%; Pred. No. 3.8e-41;
Matches 89; Conservative 1; Mismatches 5; Indels 7; Gaps 1;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPIKPAKSARSVRAQRHTDMPKTQK-----YQPPSTNKN 95
||| ||| ||| ||| ||| ||| ||| ||| ||| : | |||

Db 109 CAPLKPAKSARSVRAQRHTDMPKAQKEVHLKNTSRGSSGNKN 150

RESULT 9

PN0622

insulin-like growth factor Ia precursor - dog (fragment)

C;Species: Canis lupus familiaris (dog)

C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999

C;Accession: PN0622

R;Delafontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.E.

Gene 130, 305-306, 1993

A;Title: Sequence of a cDNA encoding dog insulin-like growth factor I.

A;Reference number: PN0622; MUID:93366192; PMID:8359700

A;Accession: PN0622

A;Molecule type: mRNA

A;Residues: 1-122

C;Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, acting primarily by stimulating cell progression through G1 into S phase.

C;Genetics:

A;Gene: IGF1a

C;Superfamily: insulin

C;Keywords: growth factor

F;20-89/Product: insulin-like growth factor Ia (fragment) #status predicted

<MAT>

Query Match 77.4%; Score 463; DB 2; Length 122;
Best Local Similarity 98.8%; Pred. No. 4.3e-41;
Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 20 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 79

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| |||

Db 80 CAPLKPAKSARSVRAQRHTDMPKAQK 105

RESULT 10

IGB01

insulin-like growth factor IA precursor - bovine (fragment)

N;Alternate names: IGF-I; somatomedin C

C;Species: Bos primigenius taurus (cattle)

C;Date: 31-Mar-1988 #sequence_revision 28-Apr-1995 #text_change 18-Jun-1999

C;Accession: S12672; A25623; S00465

R;Fotsis, T.; Murphy, C.; Gannon, F.

Nucleic Acids Res. 18, 676, 1990

A;Title: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and its IGF-1A precursor.

A;Reference number: S12672; MUID:90175014; PMID:2308858

A;Accession: S12672

A;Molecule type: mRNA

A;Residues: 1-153 <FOT>

A;Cross-references: EMBL:X15726; NID:g454; PIDN:CAA33746.1; PID:g455

A;Experimental source: liver

R;Honegger, A.; Humbel, R.E.

J. Biol. Chem. 261, 569-575, 1986

A;Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purification, primary structures, and immunological cross-reactivities.

A;Reference number: A92585; MUID:86085881; PMID:3941093

A;Accession: A25623

A;Molecule type: protein

A;Residues: 49-118 <HON>

R;Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C. Biochem. J. 251, 95-103, 1988

A;Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biological activities compared with those of a potent truncated form.

A;Reference number: S00465; MUID:88268820; PMID:3390164

A;Accession: S00465

A;Molecule type: protein

A;Residues: 49-118 <FRA>

A;Experimental source: colostrum

A;Note: a form of IGF-I lacking the first three residues and possessing enhanced biological activity compared with IGF-I was also sequenced

C;Superfamily: insulin

C;Keywords: alternative splicing; colostrum; growth factor; plasma

F;1-20/Domain: signal sequence (fragment) #status predicted <SIG>

F;22-48/Domain: propeptide #status predicted <PRO>

F;49-118/Product: insulin-like growth factor IA (active) #status experimental <MAT>

F;49-77/Domain: insulin B chain-like #status experimental <DOB>

F;78-89/Domain: insulin connecting C peptide-like #status experimental <CHC>

F;90-110/Domain: insulin A chain-like #status experimental <DOA>

F;111-118/Domain: D peptide #status experimental <CHD>

F;119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPR>

F;54-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 77.4%; Score 463; DB 1; Length 153;
Best Local Similarity 98.8%; Pred. No. 5.4e-41;
Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86

||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 109 CAPLKPAKSARSVRAQRHTDMPKAQK 134

RESULT 11

JC2483

insulin-like growth factor-I precursor - goat

C;Species: Capra aegagrus hircus (domestic goat)

C;Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999

C;Accession: JC2483

R;Mikawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T. Biosci. Biotechnol. Biochem. 59, 87-92, 1995

A;Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGF-I) gene: Diversity in transcription and post-transcription.

A;Reference number: JC2483; MUID:95201385; PMID:7765981

A;Accession: JC2483

A;Molecule type: mRNA

A;Residues: 1-154 <MIK>
A;Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118;
DDBJ:D26119

C;Genetics:

A;Introns: 21/3; 75/1; 135/3

C;Superfamily: insulin

F;1-49/Domain: signal sequence #status predicted <SIG>

F;50-119/Product: insulin-like growth factor-I #status predicted <MAT>

F;120-154/Region: E domain

Query Match 76.8%; Score 459; DB 2; Length 154;
Best Local Similarity 97.7%; Pred. No. 1.4e-40;
Matches 84; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

Db 50 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 109

Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQK 86

||| ||| ||| ||| ||| ||| ||| ||| |||

Db 110 CAPLKPTKSAR SVRAQRHTDMPKAQK 135

RESULT 12

S22878

insulin-like growth factor I precursor, splice form 2 - sheep

C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999

C;Accession: S22878; S07198

R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.

J. Mol. Endocrinol. 6, 17-31, 1991

A;Title: The ovine insulin-like growth factor-I gene: characterization, expression and identification of a putative promoter.

A;Reference number: S22877; MUID:91197361; PMID:2015053

A;Accession: S22878

A;Status: preliminary

A;Molecule type: DNA

A;Residues: 1-138 <DIC>

A;Cross-references: EMBL:X51358

R;Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.

Endocrinology 124, 1173-1183, 1989

A;Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.

A;Reference number: S07198; MUID:89136887; PMID:2537174

A;Accession: S07198

A;Molecule type: protein

A;Residues: 34-103 <FRA>

A;Experimental source: fetal plasma

C;Genetics:

A;Introns: 5/3; 59/1; 119/3

C;Superfamily: insulin

C;Keywords: alternative splicing; growth factor; plasma

F;7-33/Domain: propeptide #status predicted <PRO>

F;34-103/Product: insulin-like growth factor I (active) #status experimental <MAT>

F;34-62/Domain: insulin chain B-like #status predicted <DOB>

F;63-74/Domain: insulin connecting peptide-like #status predicted <CHC>

F;75-95/Domain: insulin chain A-like #status predicted <DOA>
F;96-103/Domain: peptide D #status predicted <CHD>
F;104-138/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
<CTP>
F;39-81,51-94,80-85/Disulfide bonds: #status predicted

Query Match 76.1%; Score 455; DB 2; Length 138;
Best Local Similarity 97.7%; Pred. No. 3.3e-40;
Matches 84; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 34 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 93

Qy 61 CAPLKAQKAKSARSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| |||
Db 94 CAPLKAQKAKSARSVRAQRHTDMPKAQK 119

RESULT 13

A33390

insulin-like growth factor I precursor, splice form 1 - sheep
N;Alternate names: somatomedin C
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 09-Mar-1990 #sequence_revision 27-Feb-1997 #text_change 23-Jul-1999
C;Accession: S22877; A33390; S07965; S07198
R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: characterization, expression and identification of a putative promoter.
A;Reference number: S22877; MUID:91197361; PMID:2015053
A;Accession: S22877
A;Molecule type: DNA
A;Residues: 1-154 <DIC>
A;Cross-references: EMBL:X51358
R;Wong, E.A.; Ohlsen, S.M.; Godfredson, J.A.; Dean, D.M.; Wheaton, J.E.
DNA 8, 649-657, 1989
A;Title: Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA population.
A;Reference number: A33390; MUID:90126234; PMID:2575490
A;Accession: A33390
A;Molecule type: mRNA
A;Residues: 1-43, 'SS', 46-154 <WON>
A;Cross-references: GB:M30653; NID:g165929; PIDN:AAA80532.1; PID:g165930
R;Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
Biochim. Biophys. Acta 997, 27-35, 1989
A;Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep serum.
A;Reference number: S04972; MUID:89323215; PMID:2752053
A;Accession: S07965
A;Molecule type: protein
A;Residues: 50-79 <HEY>
R;Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A;Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A;Reference number: S07198; MUID:89136887; PMID:2537174

A;Accession: S07198
A;Molecule type: protein
A;Residues: 50-119 <FRA>
A;Experimental source: fetal plasma
C;Genetics:
A;Introns: 21/3; 75/1; 135/3
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor; plasma
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-49/Domain: propeptide #status predicted <PRO>
F;50-119/Product: insulin-like growth factor I (active) #status experimental
<MAT>
F;50-78/Domain: insulin chain B-like #status predicted <DOB>
F;79-90/Domain: insulin connecting peptide-like #status predicted <CHC>
F;91-111/Domain: insulin chain A-like #status predicted <DOA>
F;112-119/Domain: peptide D #status predicted <CHD>
F;120-154/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
<CTP>
F;55-97,67-110,96-101/Disulfide bonds: #status predicted

Query Match 76.1%; Score 455; DB 2; Length 154;
Best Local Similarity 97.7%; Pred. No. 3.7e-40;
Matches 84; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 50 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109

Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| |||
Db 110 CAPLKAAKSAR SVRAQRHTDMPKAQK 135

RESULT 14
B27804
insulin-like growth factor IA precursor - rat
N;Alternate names: IGF-IA; somatomedin C
C;Species: Rattus norvegicus (Norway rat)
C;Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C;Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096
R;Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I gene.
A;Reference number: A27804; MUID:87222423; PMID:3034909
A;Accession: B27804
A;Molecule type: DNA
A;Residues: 1-153 <SHI>
A;Cross-references: GB:M15651; GB:J02743; NID:g204297; PIDN:AAA41215.1;
PID:g204300
R;Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund, P.K.
DNA 6, 325-330, 1987
A;Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precursor.
A;Reference number: A27849; MUID:88003970; PMID:3652906
A;Accession: A27849

A;Molecule type: mRNA
A;Residues: 27-153 <CAS>
A;Cross-references: GB:M17335; NID:g204751; PIDN:AAA41386.1; PID:g204752
R;Kato, H.; Okoshi, A.; Miura, Y.; Noguchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A;Title: A new cDNA clone relating to larger molecular species of rat insulin-like growth factor-I mRNA.
A;Reference number: JH0133; MUID:91103966; PMID:1368571
A;Accession: JH0133
A;Molecule type: mRNA
A;Residues: 27-153 <KAT>
A;Cross-references: GB:D00698; NID:g220780; PIDN:BAA00604.1; PID:g220781
A;Experimental source: liver
R;Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
Endocrinology 121, 684-691, 1987
A;Title: Identification, characterization, and regulation of a rat complementary deoxyribonucleic acid which encodes insulin-like growth factor-I.
A;Reference number: A28504; MUID:87246437; PMID:3595538
A;Accession: A28504
A;Molecule type: mRNA
A;Residues: 46-153 <MUR>
A;Cross-references: GB:M17714; NID:g204324; PIDN:AAA41227.1; PID:g204325
R;Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
Agric. Biol. Chem. 54, 2225-2230, 1990
A;Title: Evidence of introduction by molecular cloning of artificial inverted sequence at the 5'terminus of the sense strand of rat insulin-like growth factor-I cDNA.
A;Reference number: JN0088; MUID:91136779; PMID:1368576
A;Accession: JN0088
A;Molecule type: mRNA
A;Residues: 'MSAPP',22-153 <KA2>
A;Experimental source: liver
A;Note: the authors present evidence that this mRNA may contain an artifactual inversion
R;Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa, M.; Zapf, J.
J. Biol. Chem. 264, 5616-5621, 1989
A;Title: Primary structure of rat insulin-like growth factor-I and its biological activities.
A;Reference number: A32857; MUID:89174609; PMID:2538424
A;Accession: A32857
A;Molecule type: protein
A;Residues: 49-118 <TAM>
R;Canalis, E.; McCarthy, T.; Centrella, M.
Endocrinology 122, 22-27, 1988
A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C) from cultures of fetal rat calvariae.
A;Reference number: A61096; MUID:88082445; PMID:3335205
A;Accession: A61096
A;Molecule type: protein
A;Residues: 49-53,'X',55-65 <CAN>
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor
F;49-118/Product: insulin-like growth factor I #status experimental <ILG>

Query Match 75.3%; Score 450; DB 2; Length 153;
Best Local Similarity 95.3%; Pred. No. 1.2e-39;

Matches 82; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
||| ||| ||| ||| : ||| ||| ||| |||
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
||| ||| ||| |||
Db 109 CAPLKPTKSARSIRQRHTDMPKTQK 134

RESULT 15

A25540

insulin-like growth factor IA precursor - mouse

N;Alternate names: IGF-IA; somatomedin C

C;Species: Mus musculus (house mouse)

C;Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999

C;Accession: A25540; I55295; I59090; B25540

R;Bell, G.I.; Stempien, M.M.; Fong, N.M.; Rall, L.B.

Nucleic Acids Res. 14, 7873-7882, 1986

A;Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth factor I precursors.

A;Reference number: A93643; MUID:87040760; PMID:3774549

A;Accession: A25540

A;Molecule type: mRNA

A;Residues: 1-127 <BEL>

A;Cross-references: GB:X04480; NID:g51801; PIDN:CAA28168.1; PID:g51802

R;Tollefsen, S.E.; Lajara, R.; McCusker, R.H.; Clemons, D.R.; Rotwein, P.

J. Biol. Chem. 264, 13810-13817, 1989

A;Title: Insulin-like growth factors (IGF) in muscle development. Expression of IGF-I, the IGF-I receptor, and an IGF binding protein during myoblast differentiation.

A;Reference number: I55295; MUID:89340472; PMID:2474537

A;Accession: I55295

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: DNA

A;Residues: 49-108 <RES>

A;Cross-references: GB:M28139; NID:g341835; PIDN:AAA74553.1; PID:g550489

R;Mathews, L.S.; Norstedt, G.; Palmiter, R.D.

Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986

A;Title: Regulation of insulin-like growth factor I gene expression by growth hormone.

A;Reference number: I59090; MUID:87092249; PMID:3467309

A;Accession: I59090

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: DNA

A;Residues: 49-108 <RE2>

A;Cross-references: GB:M14983; NID:g194495; PIDN:AAA37925.1; PID:g194496

C;Genetics:

A;Gene: igf1

C;Superfamily: insulin

C;Keywords: alternative splicing; growth factor

F;1-22/Domain: signal sequence #status predicted <SIG>

F;23-127/Product: insulin-like growth factor IA (active) #status predicted <MAT>

F;23-51/Domain: insulin chain B-like #status predicted <DOB>

F;52-63/Domain: insulin connecting C peptide-like #status predicted <DOC>

F;64-84/Domain: insulin chain A-like #status predicted <DOA>

F;85-92/Domain: D peptide #status predicted <DOD>
F;93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
<CTP>

Query Match 74.7%; Score 447; DB 2; Length 127;
Best Local Similarity 94.2%; Pred. No. 2.1e-39;
Matches 81; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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Db 23 GPETLCGAEVLVDALQFVCGPRGFYFNKPTGYGSSI RRAPQTGI VDECCFRSCDRLREMY 82

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86

8.2. GIBLIVERTUA NG SIBA GRANTMENTO NG LAMPUNG

Search completed: December 12 2003 16:40:19

Search completed. Decem.
Job time : 12.5964 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: December 12, 2003, 16:39:37 ; Search time 23.8554 Seconds
(without alignments)
857.591 Million cell updates/sec

Title: US-09-852-261-2

Perfect score: 598

Sequence: 1 GPETLCGAELVDALQFVCGD..... STNKNTKSQRRKGSTFEEHK 110

Scoring table: BLOSUM62

Gapext 0.5, Gapop 10.0

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published_Applications_AA:*

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2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*

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13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

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16: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*

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18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Result	Query				
No.	Score	Match	Length	DB	ID
					Description

1	598	100.0	110	9	US-09-852-261-2	Sequence 2, Appli
2	572.5	95.7	111	9	US-09-852-261-6	Sequence 6, Appli
3	521.5	87.2	133	15	US-10-161-088-2	Sequence 2, Appli
4	494.5	82.7	111	9	US-09-852-261-4	Sequence 4, Appli
5	468	78.3	105	9	US-09-852-261-10	Sequence 10, Appli
6	468	78.3	137	12	US-10-251-661-8	Sequence 8, Appli
7	468	78.3	153	10	US-09-919-497-74	Sequence 74, Appli
8	468	78.3	153	15	US-10-136-639-3	Sequence 3, Appli
9	468	78.3	153	15	US-10-207-655-55	Sequence 55, Appli
10	465	77.8	105	9	US-09-852-261-14	Sequence 14, Appli
11	463	77.4	105	15	US-10-238-114-3	Sequence 3, Appli
12	463	77.4	153	15	US-10-238-114-2	Sequence 2, Appli
13	457.5	76.5	191	9	US-09-921-398-41	Sequence 41, Appli
14	457.5	76.5	191	15	US-10-280-826-41	Sequence 41, Appli
15	423	70.7	105	9	US-09-852-261-12	Sequence 12, Appli
16	386	64.5	953	12	US-10-241-596-14	Sequence 14, Appli
17	385	64.4	70	10	US-09-848-664-29	Sequence 29, Appli
18	385	64.4	70	10	US-09-848-664-30	Sequence 30, Appli
19	385	64.4	70	10	US-09-903-327A-8	Sequence 8, Appli
20	385	64.4	70	11	US-09-858-935B-3	Sequence 3, Appli
21	385	64.4	70	12	US-10-444-326-1	Sequence 1, Appli
22	385	64.4	70	14	US-10-028-410-1	Sequence 1, Appli
23	385	64.4	70	14	US-10-066-009A-1	Sequence 1, Appli
24	385	64.4	70	15	US-10-136-639-1	Sequence 1, Appli
25	385	64.4	70	15	US-10-136-841-7	Sequence 7, Appli
26	385	64.4	118	15	US-10-179-046-14	Sequence 14, Appli
27	385	64.4	155	9	US-09-921-398-39	Sequence 39, Appli
28	385	64.4	155	15	US-10-280-826-39	Sequence 39, Appli
29	385	64.4	510	10	US-09-903-327A-12	Sequence 12, Appli
30	378	63.2	91	12	US-10-323-046-42	Sequence 42, Appli
31	317	53.0	68	12	US-10-339-740-218	Sequence 218, App
32	300	50.2	56	14	US-10-066-009A-5	Sequence 5, Appli
33	237	39.6	180	15	US-10-207-655-57	Sequence 57, Appli
34	231	38.6	156	10	US-09-972-809-7	Sequence 7, Appli
35	231	38.6	180	15	US-10-081-119-38	Sequence 38, Appli
36	231	38.6	180	15	US-10-136-841-2	Sequence 2, Appli
37	231	38.6	180	15	US-10-097-340-145	Sequence 145, App
38	223.5	37.4	46	9	US-09-205-658-138	Sequence 138, App
39	223.5	37.4	46	9	US-09-205-658-139	Sequence 139, App
40	223.5	37.4	46	12	US-09-963-693-138	Sequence 138, App
41	223.5	37.4	46	12	US-09-963-693-139	Sequence 139, App
42	223	37.3	67	14	US-10-066-009A-2	Sequence 2, Appli
43	223	37.3	67	15	US-10-136-639-2	Sequence 2, Appli
44	223	37.3	67	15	US-10-136-841-8	Sequence 8, Appli
45	223	37.3	70	15	US-10-136-841-4	Sequence 4, Appli

ALIGNMENTS

RESULT 1

US-09-852-261-2

; Sequence 2, Application US/09852261

; Patent No. US20020083477A1

; GENERAL INFORMATION:

; APPLICANT: GOLDSPIK, GEOFFREY

; APPLICANT: TERENGHI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 110
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-852-261-2

Query Match 100.0%; Score 598; DB 9; Length 110;
Best Local Similarity 100.0%; Pred. No. 1.8e-61;
Matches 110; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
Db 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
Qy 61 CAPL KPAKSAR SVRAQRH TDMPKTQ KYQPPSTN KNTKSQ RRKG STFEEHK 110
Db 61 CAPL KPAKSAR SVRAQRH TDMPKTQ KYQPPSTN KNTKSQ RRKG STFEEHK 110

RESULT 2

US-09-852-261-6
; Sequence 6, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; APPLICANT: TERENGHI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
; LENGTH: 111
; TYPE: PRT
; ORGANISM: Oryctolagus cuniculus
US-09-852-261-6

Query Match 95.7%; Score 572.5; DB 9; Length 111;
Best Local Similarity 96.4%; Pred. No. 1.6e-58;
Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;
Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
Db 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
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Db 61 CAPLKPAKAAR SVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKKGSTFEEHK 111

RESULT 3

US-10-161-088-2

; Sequence 2, Application US/10161088
; Publication No. US20030077761A1
; GENERAL INFORMATION:
; APPLICANT: Parrow, Vendela
; APPLICANT: Rosengren, Linda
; TITLE OF INVENTION: NEW METHODS
; FILE REFERENCE: 13425-111001
; CURRENT APPLICATION NUMBER: US/10/161,088
; CURRENT FILING DATE: 2002-05-31
; PRIOR APPLICATION NUMBER: SE 0101934-8
; PRIOR FILING DATE: 2001-06-01
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 133
; TYPE: PRT
; ORGANISM: Homo sapiens

US-10-161-088-2

Query Match 87.2%; Score 521.5; DB 15; Length 133;
Best Local Similarity 89.2%; Pred. No. 1.6e-52;
Matches 99; Conservative 2; Mismatches 9; Indels 1; Gaps 1;

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Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
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Db 83 CAPLKPTKAARSIR AQRHTDMPKTQKSPSLSTNKKTLQRRRKKGSTFEEHK 133

RESULT 4

US-09-852-261-4

; Sequence 4, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; APPLICANT: TERENGHI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 111
; TYPE: PRT

; TITLE OF INVENTION: Methods and Compositions for Regulating
; TITLE OF INVENTION: Memory Consolidation
; FILE REFERENCE: 3499.1001-003
; CURRENT APPLICATION NUMBER: US/10/251,661
; CURRENT FILING DATE: 2002-09-20
; PRIOR APPLICATION NUMBER: 60/193,614
; PRIOR FILING DATE: 2000-03-31
; PRIOR APPLICATION NUMBER: PCT/US01/10661
; PRIOR FILING DATE: 2001-04-02
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 137
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-251-661-8

Query Match 78.3%; Score 468; DB 12; Length 137;
Best Local Similarity 100.0%; Pred. No. 2.6e-46;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 33 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 92
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 93 CAPLKPAKSARSVRAQRHTDMPKTQK 118

RESULT 7

US-09-919-497-74

; Sequence 74, Application US/09919497
; Patent No. US20020106662A1
; GENERAL INFORMATION:
; APPLICANT: Mutter, George L.
; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
; FILE REFERENCE: B0801/7225
; CURRENT APPLICATION NUMBER: US/09/919,497
; CURRENT FILING DATE: 2001-07-31
; PRIOR APPLICATION NUMBER: US 60/221,735
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 100
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 74
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-919-497-74

Query Match 78.3%; Score 468; DB 10; Length 153;
Best Local Similarity 100.0%; Pred. No. 3e-46;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
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Db 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134

RESULT 8

US-10-136-639-3

; Sequence 3, Application US/10136639
; Publication No. US20030072761A1
; GENERAL INFORMATION:
; APPLICANT: LeBowitz, Jonathan
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS
THE BLOOD BRAIN
; TITLE OF INVENTION: BARRIER
; FILE REFERENCE: SYM-008
; CURRENT APPLICATION NUMBER: US/10/136,639
; CURRENT FILING DATE: 2002-09-06
; PRIOR APPLICATION NUMBER: US 60/329,650
; PRIOR FILING DATE: 2001-10-16
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 3
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens

US-10-136-639-3

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Best Local Similarity 100.0%; Pred. No. 3e-46;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
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Db 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134

RESULT 9

US-10-207-655-55

; Sequence 55, Application US/10207655
; Publication No. US20030118592A1
; GENERAL INFORMATION:
; APPLICANT: Ledbetter, Jeffrey A.
; APPLICANT: Hayden-Ledbetter, Martha S.
; TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
; FILE REFERENCE: 390069.401C1
; CURRENT APPLICATION NUMBER: US/10/207,655
; CURRENT FILING DATE: 2002-07-25
; NUMBER OF SEQ ID NOS: 426
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 55
; LENGTH: 153
; TYPE: PRT

; ORGANISM: Homo sapiens
US-10-207-655-55

Query Match 78.3%; Score 468; DB 15; Length 153;
Best Local Similarity 100.0%; Pred. No. 3e-46;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134

RESULT 10

US-09-852-261-14

; Sequence 14, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; APPLICANT: TERENGHI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Oryctolagus cuniculus
US-09-852-261-14

Query Match 77.8%; Score 465; DB 9; Length 105;
Best Local Similarity 98.8%; Pred. No. 4.2e-46;
Matches 85; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
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Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 61 CAPLKPAKAARSVRAQRHTDMPKTQK 86

RESULT 11

US-10-238-114-3

; Sequence 3, Application US/10238114
; Publication No. US20030100073A1
; GENERAL INFORMATION:
; APPLICANT: Merial
; APPLICANT: ANDREONI , Christine Michele

; TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST
FELINE RETROVIRUS
; FILE REFERENCE: 454313-3165.1
; CURRENT APPLICATION NUMBER: US/10/238,114
; CURRENT FILING DATE: 2002-09-10
; PRIOR APPLICATION NUMBER: FR 01 11736
; PRIOR FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: US 60/318,666
; PRIOR FILING DATE: 2001-09-12
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Felis catus
US-10-238-114-3

Query Match 77.4%; Score 463; DB 15; Length 105;
Best Local Similarity 98.8%; Pred. No. 7.1e-46;
Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Db 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 61 CAPLKPAKSARSVRAQRHTDMPKAQK 86

RESULT 12
US-10-238-114-2
; Sequence 2, Application US/10238114
; Publication No. US20030100073A1
; GENERAL INFORMATION:
; APPLICANT: Merial
; APPLICANT: ANDREONI, Christine Michele
; TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST
FELINE RETROVIRUS
; FILE REFERENCE: 454313-3165.1
; CURRENT APPLICATION NUMBER: US/10/238,114
; CURRENT FILING DATE: 2002-09-10
; PRIOR APPLICATION NUMBER: FR 01 11736
; PRIOR FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: US 60/318,666
; PRIOR FILING DATE: 2001-09-12
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Felis catus
US-10-238-114-2

Query Match 77.4%; Score 463; DB 15; Length 153;
Best Local Similarity 98.8%; Pred. No. 1.1e-45;
Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 108
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 109 CAPLKPAKSARSVRAQRHTDMPKAQK 134

RESULT 13

US-09-921-398-41

; Sequence 41, Application US/09921398

; Patent No. US20020055169A1

; GENERAL INFORMATION:

; APPLICANT: Tekamp-Olson, Patricia

; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; PROTEINS IN YEAST

; NUMBER OF SEQUENCES: 41

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP

; STREET: 3605 Glenwood Ave. Suite 310

; CITY: Raleigh

; STATE: NC

; COUNTRY: US

; ZIP: 27622

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/921,398

; FILING DATE: 02-Aug-2001

; CLASSIFICATION: <Unknown>

; ATTORNEY/AGENT INFORMATION:

; NAME: Spruill, W. Murray

; REGISTRATION NUMBER: 32,943

; REFERENCE/DOCKET NUMBER: 5784-4

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 919 420 2202

; TELEFAX: 919 881 3175

; INFORMATION FOR SEQ ID NO: 41:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 191 amino acids

; TYPE: amino acid

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; SEQUENCE DESCRIPTION: SEQ ID NO: 41:

US-09-921-398-41

Query Match 76.5%; Score 457.5; DB 9; Length 191;

Best Local Similarity 98.9%; Pred. No. 6.3e-45;

Matches 86; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

RESULT 15

US-09-852-261-12

; Sequence 12, Application US/09852261

Patent No. US20020083477A1

GENERAL INFORMATION:

APPLICANT: GOLDSPIK, GEOFFREY

APPLICANT: TERENGHI, GIORGIO

TITLE OF INVENTION: REPAIR OF NERVE DAMAGE

FILE REFERENCE: 117-351

; CURRENT APPLICATION NUMBER: US/09/852,261

CURRENT FILING DATE: 2001-05-10

PRIOR APPLICATION NUMBER: GB 0011278.9

PRIOR FILING DATE: 2000-05-10

; NUMBER OF SEQ ID NOS: 14

; SOFTWARE: PatentIn Ver. 2.

; SEQ ID NO 12

; LENGTH: 10

; TYPE: PRT

; ORGANISM: *Rattus* sp.

US-09-852-261-12

Query Match 70.7%; Score 423; DB 9; Length 105;
Best Local Similarity 90.7%; Pred. No. 3e-41;
Matches 78; Conservative 1; Mismatches 7; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALOFVCGDRGFYFNKPTGYGSSSRRA P OTGI VDECCFRSCDI RRI EMY 60

Digitized by srujanika@gmail.com

THE JOURNAL OF VESTIGIALITY

Qy 61 CAPLKPAKSARSVRAORHTDMPKTOK

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Search completed: December 12, 2003, 16:51:59

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: December 12, 2003, 16:34:01 ; Search time 28.494 Seconds
(without alignments)
996.203 Million cell updates/sec

Title: US-09-852-261-2

Perfect score: 598

Sequence: 1 GPETLCGAELVDALQFVCGD. STNKNTKSQRRKGSTFEEHK 110

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 830525 seqs, 258052604 residues

Total number of hits satisfying chosen parameters: 830525

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SPTREMBL_23:
1: sp_archea:
2: sp_bacteria:
3: sp_fungi:
4: sp_human:
5: sp_invertebrate:
6: sp_mammal:
7: sp_mhc:
8: sp_organelle:
9: sp_phage:
10: sp_plant:
11: sp_rat:
12: sp_virus:
13: sp_vertebrate:
14: sp_unclassified:
15: sp_rvirus:
16: sp_bacteriap:
17: sp_archeap:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

%

Result	Query				
No.	Score	Match	Length	DB	ID

Description

1	590	98.7	139	4	Q13429	Q13429 homo sapien
2	486	81.3	165	11	Q8CAR0	Q8car0 mus musculu
3	468	78.3	130	4	Q9NP10	Q9np10 homo sapien
4	468	78.3	137	4	Q14620	Q14620 homo sapien
5	463	77.4	133	6	Q9N1C1	Q9n1c1 bos taurus
6	458	76.6	139	6	P79167	P79167 equus cabal
7	450	75.3	127	11	P97899	P97899 rattus sp.
8	447	74.7	153	11	Q8C4U6	Q8c4u6 mus musculu
9	422	70.6	153	13	O93380	O93380 meleagris g
10	403.5	67.5	161	13	Q91230	Q91230 oncorhynchu
11	401	67.1	145	13	Q91475	Q91475 salmo salar
12	401	67.1	155	13	Q91162	Q91162 oncorhynchu
13	401	67.1	188	13	P81268	P81268 oncorhynchu
14	401	67.1	188	13	Q91965	Q91965 oncorhynchu
15	399.5	66.8	178	13	Q9IBI0	Q9ibi0 cyprinus ca
16	399	66.7	116	13	Q91161	Q91161 oncorhynchu
17	399	66.7	149	13	Q91231	Q91231 oncorhynchu
18	392	65.6	117	13	Q91476	Q91476 salmo salar
19	390.5	65.3	161	13	Q90VV9	Q90vv9 brachydanio
20	382.5	64.0	117	13	Q9I9I4	Q9i9i4 ctenopharyn
21	381	63.7	161	13	Q9PWK2	Q9pwk2 carassius a
22	379.5	63.5	161	13	Q98SR6	Q98sr6 megalobrama
23	378	63.2	161	13	Q9YI82	Q9yi82 carassius a
24	377	63.0	185	13	057436	057436 paralichthy
25	377	63.0	186	13	093527	093527 paralichthy
26	376.5	63.0	159	13	093607	093607 paralichthy
27	376	62.9	182	13	073720	073720 oreochromis
28	376	62.9	182	13	042289	042289 oreochromis
29	376	62.9	182	13	P79824	P79824 oreochromis
30	370	61.9	186	13	Q9PSX5	Q9psx5 paralichthy
31	355.5	59.4	185	13	Q9YI57	Q9yi57 acanthopagr
32	355	59.4	66	6	Q9N1S6	Q9n1s6 capreolus c
33	351	58.7	184	13	042336	042336 myoxocephal
34	333.5	55.8	69	6	002807	002807 bubalus bub
35	302	50.5	57	6	Q28236	Q28236 cervus elap
36	298.5	49.9	126	13	Q91442	Q91442 squalus aca
37	278	46.5	62	13	Q9IAA0	Q9iaa0 carassius a
38	264	44.1	215	13	073721	073721 tilapia sp.
39	261	43.6	215	13	042429	042429 lates calca
40	256.5	42.9	207	13	Q90XD0	Q90xd0 cyprinus ca
41	255.5	42.7	187	13	057687	057687 taenopygia
42	250.5	41.9	217	13	Q90WW4	Q90ww4 xenopus lae
43	248.5	41.6	187	13	P79890	P79890 gallus gall
44	248.5	41.6	212	13	Q8JIE4	Q8jie4 brachydanio
45	247	41.3	132	13	Q8AV14	Q8av14 petromyzon

ALIGNMENTS

RESULT 1

Q13429

ID Q13429 PRELIMINARY; PRT; 139 AA.

AC Q13429;

DT 01-NOV-1996 (TrEMBLrel. 01, Created)

DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)

DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)

DE Insulin-like growth factor-I (Fragment).
GN IGF-I.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=95237119; PubMed=7720641;
RA Chew S.L., Lavender P., Clark A.J., Ross R.J.;
RT "An alternatively spliced human insulin-like growth factor-I
transcript with hepatic tissue expression that diverts away from the
mitogenic IBE1 peptide.";
RL Endocrinology 136:1939-1944(1995).
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; U40870; AAA96152.1; -.
DR HSSP; P01343; 2GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT NON_TER 1 1
SQ SEQUENCE 139 AA; 15611 MW; A62271872CA29DE4 CRC64;

Query Match 98.7%; Score 590; DB 4; Length 139;
Best Local Similarity 99.1%; Pred. No. 1.4e-62;
Matches 109; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 30 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 89
Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEEHK 110
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 90 CAPLKPAKSAR SVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEERK 139

RESULT 2

Q8CAR0

ID Q8CAR0 PRELIMINARY; PRT; 165 AA.
AC Q8CAR0;
DT 01-MAR-2003 (TrEMBLrel. 23, Created)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Unknown EST.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Thymus;
RX MEDLINE=22354683; PubMed=12466851;
RA The FANTOM Consortium,
RA the RIKEN Genome Exploration Research Group Phase I & II Team;

RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs.";
RL Nature 420:563-573 (2002).
DR EMBL; AK038119; BAC29934.1; -.
SQ SEQUENCE 165 AA; 18473 MW; 2CE0D3DA981C93F8 CRC64;

Query Match 81.3%; Score 486; DB 11; Length 165;
Best Local Similarity 83.5%; Pred. No. 4.6e-50;
Matches 91; Conservative 4; Mismatches 14; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 33 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 92

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEEH 109
||| ||| | : | | : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 93 CAPLKPTKAARSIRAQRHTDMPKTQKSPSLSTNKTKLQRRRKGEPKTH 141

RESULT 3

Q9NP10

ID Q9NP10 PRELIMINARY; PRT; 130 AA.
AC Q9NP10;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE IGF1 protein precursor.
GN IGF1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=88065102; PubMed=3683205;
RA Rall L.B., Scott J., Bell G.I.,
RT "Human insulin-like growth factor I and II messenger RNA: isolation of
RT complementary DNA and analysis of expression.";
RL Meth. Enzymol. 146:239-248(1987).
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; M29644; AAA52543.1; -.
DR HSSP; P01343; 2GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Signal.
FT SIGNAL 1 25 POTENTIAL.
FT CHAIN 26 95 POTENTIAL.
SQ SEQUENCE 130 AA; 14406 MW; 970FBAAECFA0352D CRC64;

Query Match 78.3%; Score 468; DB 4; Length 130;
Best Local Similarity 100.0%; Pred. No. 5e-48;
Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||
 Db 26 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 85
 |||||||
 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
 |||||||
 Db 86 CAPLKPAKSARSVRAQRHTDMPKTQK 111

RESULT 4

Q14620

ID Q14620 PRELIMINARY; PRT; 137 AA.
 AC Q14620;
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
 DE Insulin-like growth factor I precursor.
 GN IGF1.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91187000; PubMed=2082190;
 RA Tobin G., Yee D., Brunner N., Rotwein P.;
 RT "A novel human insulin-like growth factor I messenger RNA is expressed
 in normal and tumor cells.";
 RL Mol. Endocrinol. 4:1914-1920(1990).
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M37484; AAA52789.1; -.
 DR HSSP; P01343; 2GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal.
 FT SIGNAL 1 32 POTENTIAL.
 FT CHAIN 33 137 INSULIN-LIKE GROWTH FACTOR I.
 SQ SEQUENCE 137 AA; 15177 MW; BFCC0D11E32AB75D CRC64;

Query Match 78.3%; Score 468; DB 4; Length 137;
 Best Local Similarity 100.0%; Pred. No. 5.3e-48;
 Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||
 Db 33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 92
 |||||||
 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
 |||||||
 Db 93 CAPLKPAKSARSVRAQRHTDMPKTQK 118

RESULT 5

Q9N1C1

ID Q9N1C1 PRELIMINARY; PRT; 133 AA.

AC Q9N1C1;

DT 01-OCT-2000 (TrEMBLrel. 15, Created)

DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)

DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)

DE Insulin-like growth factor I (Fragment).

GN IGF1.

OS Bos taurus (Bovine).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;

OC Bovidae; Bovinae; Bos.

OX NCBI_TaxID=9913;

RN [1]

RP SEQUENCE FROM N.A.

RA Lien S., Karlsen A., Klemetsdal G., Vage D.I., Olsaker I.,

RA Klungland H., Aasland M., Heringstad B., Ruane J., Gomez-Raya L.;

RT "A primary screen of the bovine genome for quantitative trait loci
affecting twinning rate.";

RL Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.

CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; AF210387; AAF72409.1; -.

DR EMBL; AF210385; AAF72409.1; JOINED.

DR EMBL; AF210386; AAF72409.1; JOINED.

DR HSSP; P01343; 2GF1.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PR00277; INSULINB.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

FT NON_TER 1 1

SQ SEQUENCE 133 AA; 14674 MW; A6991DBCB75C103B CRC64;

Query Match 77.4%; Score 463; DB 6; Length 133;

Best Local Similarity 98.8%; Pred. No. 2e-47;

Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 29 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 88
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Qy 61 CAPLKPAKSARSVRQRHTDMPKTQK 86
||| ||| ||| ||| ||| ||| ||| ||| |||
Db 89 CAPLKPAKSARSVRQRHTDMPKAQK 114

RESULT 6
P79167
ID P79167 PRELIMINARY; PRT; 139 AA.
AC P79167;
DT 01-MAY-1997 (TrEMBLrel. 03, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C)
DE (Fragments).
GN IGF1.

OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP SEQUENCE OF 1-122 FROM N.A.
 RC TISSUE=LIVER;
 RX MEDLINE=97013467; PubMed=8860303;
 RA Otte K., Rozell B., Gessbo A., Engstrom W.;
 RT "Cloning and sequencing of an equine insulin-like growth factor I cDNA
 RT and its expression in fetal and adult tissues.";
 RL Gen. Comp. Endocrinol. 102:11-15(1996).
 RN [2]
 RP SEQUENCE OF 123-139 FROM N.A.
 RA Nixon A.J., Toland B.D., Sandell L.J.;
 RL Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: SECRETED.
 CC -!- ALTERNATIVE PRODUCTS: TWO ISOFORMS; ISOFORM IGF-IA (P51458) AND
 CC ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING
 CC (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; U28070; AAA68952.1; -.
 DR EMBL; U85271; AAB47484.1; -.
 DR HSSP; P01343; 2GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Signal.
 FT SIGNAL 1 ?
 FT PROPEP ? 48 BY SIMILARITY.
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 >139 E PEPTIDE.
 FT NON_CONS 122 123
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT NON_TER 139 139
 SQ SEQUENCE 139 AA; 15612 MW; CDC0E8F19C261A2C CRC64;

Query Match 76.6%; Score 458; DB 6; Length 139;
 Best Local Similarity 85.3%; Pred. No. 8.4e-47;
 Matches 87; Conservative 1; Mismatches 2; Indels 12; Gaps 1;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||
 Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108
 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRK 102
 ||||||| || |||:

Db 109 CAPLKPAKSARSRV-----YQPPSTNKTKLQR 138

RESULT 7

P97899

ID P97899 PRELIMINARY; PRT; 127 AA.
AC P97899;
DT 01-MAY-1997 (TrEMBLrel. 03, Created)
DT 01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Insulin-like growth factor I.
OS Rattus sp.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10118;
RN [1]
RP PARTIAL SEQUENCE FROM N.A.
RX MEDLINE=87222423; PubMed=3034909;
RA Shimatsu A., Rotwein P.;
RT "Mosaic evolution of the insulin-like growth factors.";
RL J. Biol. Chem. 262:7894-7900(1987).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=91103966; PubMed=1368571;
RA Kato H., Okoshi A., Miura Y., Noguchi T.;
RT "A new cDNA clone relating to larger molecular species of rat insulin-
like growth factor-I mRNA.";
RL Agric. Biol. Chem. 54:1599-1601(1990).
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; D00698; BAA00604.1; -.
DR HSSP; P01343; 2GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT CHAIN 23 92 POTENTIAL.
SQ SEQUENCE 127 AA: 14106 MW: 104E126BCFCA5CB7 CRC64.

Query Match 75.3%; Score 450; DB 11; Length 127;
Best Local Similarity 95.3%; Pred. No. 6.9e-46;
Matches 82; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

RESULT 8

Q8C4U6

ID Q8C4U6 PRELIMINARY; PRT; 153 AA
AC Q8C4U6;

DT 01-MAR-2003 (TrEMBLrel. 23, Created)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Unknown EST.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Cerebellum;
RX MEDLINE=22354683; PubMed=12466851;
RA The FANTOM Consortium,
RA the RIKEN Genome Exploration Research Group Phase I & II Team,
RT "Analysis of the mouse transcriptome based on functional annotation of
RT 60,770 full-length cDNAs";
RL Nature 420:563-573 (2002).
DR EMBL; AK081019; BAC38117.1; -.
SQ SEQUENCE 153 AA; 17093 MW; 967596AEAC0CA387 CRC64;

Query Match 74.7%; Score 447; DB 11; Length 153;
Best Local Similarity 94.2%; Pred. No. 1.9e-45;
Matches 81; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 49 GPETLCGAEVL DALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQK 86
||| ||| ||| : ||| : ||| ||| ||| ||| |||
Db 109 CAPLKPTKAARSIR AQRHTDMPKTQK 134

RESULT 9
093380
ID 093380 PRELIMINARY; PRT; 153 AA.
AC 093380;
DT 01-NOV-1998 (TrEMBLrel. 08, Created)
DT 01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Insulin-like growth factor-I precursor.
GN IGFI.
OS Meleagris gallopavo (Common turkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Meleagrididae; Meleagris.
OX NCBI_TaxID=9103;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Big 6 ML Tom; TISSUE=Liver;
RA Czerwinski S.M., Ashwell C.M., McMurry J.P.;
RT "Cloning of turkey insulin-like growth factor-I (IGF-I).";
RL Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF074980; AAC26006.1; -.
DR HSSP; P01343; 2GF1.
DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal.
 FT SIGNAL 1 48 POTENTIAL.
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR-I.
 SQ SEQUENCE 153 AA; 17295 MW; 5AF1E5B8D13C70B5 CRC64;

 Query Match 70.6%; Score 422; DB 13; Length 153;
 Best Local Similarity 89.5%; Pred. No. 1.9e-42;
 Matches 77; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

 Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
 Db 49 GPETLCGAEVL DALQFVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQS CDLRRLEMY 108

 Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQK 86
 ||||:|||:|||||:|||||:|||:
 Db 109 CAPIKPPKSAR SVRAQRHTDMPKAQK 134

RESULT 10

Q91230

ID Q91230 PRELIMINARY; PRT; 161 AA.
 AC Q91230;
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
 DE Insulin-like growth factor-I.
 GN IGF-I.
 OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 OX NCBI_TaxID=74940;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Big Qualicum River; TISSUE=Liver;
 RX MEDLINE=93247592; PubMed=7683374;
 RA Wallis A.E., Devlin R.H.;
 RT "Duplicate insulin-like growth factor-I genes in salmon display
 alternative splicing pathways."
 RL Mol. Endocrinol. 7:409-422(1993).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Big Qualicum River; TISSUE=Liver;
 RA Devlin R.H.;
 RL Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; U15961; AAA67267.1; -.
 DR HSSP; P01343; 2GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.
 SQ SEQUENCE 161 AA; 17763 MW; A5A85D121377BF67 CRC64;

Query Match 67.5%; Score 403.5; DB 13; Length 161;
 Best Local Similarity 72.0%; Pred. No. 3.2e-40;
 Matches 77; Conservative 12; Mismatches 15; Indels 3; Gaps 2;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 ||||| ||||| |||: |||: |||: |||: |||: |||: |||: |||: |||: |||: |||: |||: |||:
 Db 45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNT--KSQRRKGST 105
 |||: | |: |||: |||: |||: | | : | | | : | | : | | : | |:
 Db 105 CAPVKSGKAARSVRAQRHTDMPRTPK-KPLSGNSHTSCKEVHQKNSS 150

RESULT 11

Q91475

ID Q91475 PRELIMINARY; PRT; 145 AA.
 AC Q91475;
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
 DE Insulin-like growth factor I precursor (Fragment).
 OS *Salmo* *salar* (Atlantic salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 OC Protacanthopterygii; Salmoniformes; Salmonidae; *Salmo*.
 OX NCBI_TaxID=8030;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93024477; PubMed=1406698;
 RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.,
 RT "Nucleotide sequence and tissue distribution of three insulin-like
 RT growth factor I prohormones in salmon.";
 RL Mol. Endocrinol. 6:1202-1210(1992).
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M81904; AAA18211.1; -.
 DR HSSP; P01343; 2GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal.
 FT NON_TER 1 1
 FT SIGNAL <1 18 POTENTIAL.
 FT CHAIN 19 >88 INSULIN-LIKE GROWTH FACTOR I.
 FT NON_TER 145 145
 SQ SEQUENCE 145 AA; 15885 MW; 3D94EDF477268FC4 CRC64;

Query Match 67.1%; Score 401; DB 13; Length 145;
 Best Local Similarity 72.3%; Pred. No. 5.7e-40;
 Matches 73; Conservative 11; Mismatches 17; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
 Db 19 GPETLCGAEVL DALQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRL 78
 |||:| |:|||||:|||||:| | | : :|||
 Qy 61 CAPLKA KSAR SVRA QRHT DMPKTQ KYQPPSTN KNTKSQRR 101
 |||:| |:|||||:|||||:| | | : :|||
 Db 79 CAPVKSGKA ARSVRA QRHT DMPRTPKV STAVQNV DRG TERR 119

RESULT 12

Q91162

ID Q91162 PRELIMINARY; PRT; 155 AA.
 AC Q91162;
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
 DE Insulin-like growth factor I precursor (Fragment).
 OS Oncorhynchus kisutch (Coho salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 OX NCBI_TaxID=8019;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=90190659; PubMed=2628735;
 RA Cao Q.P., Duguay S.J., Plisetskaya E., Steiner D.F., Chan S.J.;
 RT "Nucleotide sequence and growth hormone regulated expression of salmon
 RT insulin-like growth factor I mRNA.";
 RL Mol. Endocrinol. 3:2005-2010(1989).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93024477; PubMed=1406698;
 RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
 RT "Nucleotide sequence and tissue distribution of three insulin-like
 RT growth factor I prohormones in salmon.";
 RL Mol. Endocrinol. 6:1202-1210(1992).
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M81913; AAA49413.1; -.
 DR HSSP; P01343; 2GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; IlGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal.
 FT NON_TER 1 1
 FT SIGNAL <1 18 POTENTIAL.
 FT CHAIN 19 >88 INSULIN-LIKE GROWTH FACTOR I.
 FT CONFLICT 73 73 R -> X (IN REF. 1).
 FT NON_TER 155 155
 SQ SEQUENCE 155 AA; 16968 MW; 022FD3CA39CA3160 CRC64;

Query Match 67.1%; Score 401; DB 13; Length 155;
 Best Local Similarity 72.3%; Pred. No. 6.1e-40;
 Matches 73; Conservative 11; Mismatches 17; Indels 0; Gaps 0;

QY 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
|||:|||||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:
Db 19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 78
|||:|||:|||:|||:|||:|||:|||:|||:|||:|||:
QY 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
|||:|||:|||:|||:|||:|||:|||:
Db 79 CAPVKSGKAARSVRAQRHTDMPRTPKVSTAVQNVDRGTER 119

RESULT 13

P81268

ID P81268 PRELIMINARY; PRT; 188 AA.
AC P81268;
DT 01-AUG-1998 (TrEMBLrel. 07, Created)
DT 01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Insulin-like growth factor I precursor.
GN IGF-I.1.
OS Oncorhynchus keta (Chum salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8018;
RN [1]
RP SEQUENCE FROM N.A.
RA Kavsan V.M., Koval A.P., Grebenjuk V.A., Chan S.J., Steiner D.F.,
RA Roberts C.T. Jr., Leroith D.;
RT "Structure of the Chum Salmon Insulin-Like Growth Factor I Gene.";
RL DNA Cell Biol. 11:729-737(1993).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=94296559; PubMed=8024699;
RA Kavsan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S.,
RA Roberts C.T.Jr., Leroith D.;
RT "Isolation of a second nonallelic insulin-like growth factor I gene
from the salmon genome.";
RL DNA Cell Biol. 13:555-559(1994).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=95032736;
RA Koval A., Kulik V., Duguay S., Plisetskaya E., Adamo M.L.,
RA Roberts C.T.Jr., Leroith D., Kavsan V.;
RT "Characterization of a salmon insulin-like growth factor I promoter.";
RL DNA Cell Biol. 13:1057-1062(1994).
RN [4]
RP SEQUENCE FROM N.A.
RA Gebenjuk V.A., Skorokhod A.S., Anoprienko O.V., Koval A.P.;
RL Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF063216; AAC18833.1; -.
DR HSSP; P01343; 2GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 188 AA; 20792 MW; F4CEB6D05E0F24B8 CRC64;
Query Match 67.1%; Score 401; DB 13; Length 188;
Best Local Similarity 72.3%; Pred. No. 7.6e-40;
Matches 73; Conservative 11; Mismatches 17; Indels 0; Gaps 0;
Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
Qy 61 CAPLKPAAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
Db 105 CAPVKSGKAARSVRAQRHTDMPRTPKISTAVQNVDRGTER 145

RESULT 14

Q91965

ID Q91965 PRELIMINARY; PRT; 188 AA.

AC Q91965;

DT 01-NOV-1996 (TrEMBLrel. 01, Created)

DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)

DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)

DE Insulin-like growth factor-I.

GN IGF-I.

OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;

OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.

OX NCBI_TaxID=74940;

RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RX MEDLINE=93247592; PubMed=7683374;

RA Wallis A.E., Devlin R.H.;

RT "Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";

RL Mol. Endocrinol. 7:409-422(1993).

RN [2]

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RA Devlin R.H.;

RL Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.

RN [3]

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RA Devlin R.H.;

RL Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.

CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; U15960; AAA67266.1; -.

DR EMBL; U14536; AAA67263.1; -.

DR HSSP; P01343; 2GF1.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PR00277; INSULINB.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.
 SQ SEQUENCE 188 AA; 20782 MW; F4D705BA811024B8 CRC64;

Query Match 67.1%; Score 401; DB 13; Length 188;
 Best Local Similarity 72.3%; Pred. No. 7.6e-40;
 Matches 73; Conservative 11; Mismatches 17; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 ||||||| ||| |||: |||: |||: |||: |||: |||: |||: |||: |||: |||: |||: |||: |||:
 Db 45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104

Qy 61 CAPLKPAAKSARVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
 |||:| |:|||:|||:|||:| | |: :|||:
 Db 105 CAPVKSGKAARSARVRAQRHTDMPRTPKVSTAVQNVDRGTER 145

RESULT 15
 Q9IBI0
 ID Q9IBI0 PRELIMINARY; PRT; 178 AA.
 AC Q9IBI0;
 DT 01-OCT-2000 (TrEMBLrel. 15, Created)
 DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
 DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
 DE Insulin-like growth factor I subtype Ea2.
 GN IGF-IEA2.
 OS Cyprinus carpio (Common carp).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
 OC Cyprinidae; Cyprinus.
 OX NCBI_TaxID=7962;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=96241923; PubMed=8680527;
 RA Liang Y.H., Cheng C.H., Chan K.M.;
 RT "Insulin-like growth factor IEa2 is the predominantly expressed form
 of IGF in common carp (Cyprinus carpio).";
 RL Mol. Mar. Biol. Biotechnol. 5:145-152(1996).
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; S82374; AAB37702.2; -.
 DR HSSP; P01343; 2GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; I1GF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 SQ SEQUENCE 178 AA; 19687 MW; 7075A34FF379C459 CRC64;

Query Match 66.8%; Score 399.5; DB 13; Length 178;
 Best Local Similarity 69.8%; Pred. No. 1.1e-39;
 Matches 74; Conservative 13; Mismatches 18; Indels 1; Gaps 1;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 ||||||| ||| |||: |||: |||: |||: |||: |||: |||: |||: |||: |||:
 Db 62 GPETLCGAELVDTLQFVCGDRGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 121

Qy 61 CAPLPAKSARSVRAQRHTDMPKT-QKYQPPSTNKNTKSQRRKGST 105
|||:||| :||||||| |:| :| | :| |:
Db 122 CAPVKPGKTPRSVRAQRHTDSPRTAKKPLPGQSHSSYKEVHQKNSS 167

Search completed: December 12, 2003, 16:39:30
Job time : 30.494 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: December 12, 2003, 16:33:21 ; Search time 7.62048 Seconds
(without alignments)
678.820 Million cell updates/sec

Title: US-09-852-261-2

Perfect score: 598

Sequence: 1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 127863 seqs, 47026705 residues

Total number of hits satisfying chosen parameters: 127863

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt_41:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

%

Result	Query	No.	Score	Match	Length	DB	ID	Description
1	572.5	95.7	143	1	IGF1_RABIT			Q95222 oryctolagus
2	560	93.6	195	1	IGFB_HUMAN			P05019 homo sapien
3	521.5	87.2	133	1	IGFB_MOUSE			P05018 mus musculu
4	494	82.6	181	1	IGFB_RAT			P08024 rattus norv
5	468	78.3	130	1	IGF1_CAVPO			P17647 cavia porce
6	468	78.3	153	1	IGFA_HUMAN			P01343 homo sapien
7	464.5	77.7	153	1	IGF1_PIG			P16545 sus scrofa
8	463	77.4	122	1	IGF1_CANFA			P33712 canis famil
9	463	77.4	154	1	IGF1_BOVIN			P07455 bos taurus
10	459	76.8	154	1	IGF1_CAPHI			P51457 capra hircu
11	455	76.1	154	1	IGF1_SHEEP			P10763 ovis aries
12	450	75.3	153	1	IGFA_RAT			P08025 rattus norv
13	447	74.7	127	1	IGFA_MOUSE			P05017 mus musculu
14	422	70.6	124	1	IGF1_COTJA			P51462 coturnix co
15	422	70.6	153	1	IGF1_CHICK			P18254 gallus gall
16	419.5	70.2	153	1	IGF1_XENLA			P16501 xenopus lae
17	414	69.2	81	1	IGF1_SUNMU			Q28933 suncus muri

18	403	67.4	122	1	IGF1_HORSE	P51458 equus cabal
19	401	67.1	176	1	IGF1_ONCKI	P17085 oncorhynchus
20	399.5	66.8	161	1	IGFB_CYPCA	Q90326 cyprinus carpio
21	398	66.6	176	1	IGF1_ONCMY	Q02815 oncorhynchus
22	393.5	65.8	161	1	IGFA_CYPCA	Q90325 cyprinus carpio
23	264.5	44.2	214	1	IGF2_ONCMY	Q02816 oncorhynchus
24	241	40.3	179	1	IGF2_SHEEP	P10764 ovis aries
25	235	39.3	128	1	IGF2_CAVPO	Q08279 cavia porcellus
26	235	39.3	155	1	IGF2_BOVIN	P07456 bos taurus
27	233	39.0	180	1	IGF2_MOUSE	P09535 mus musculus
28	232.5	38.9	129	1	IGF2_MUSVI	P41694 mustela vison
29	231	38.6	180	1	IGF2_HUMAN	P01344 homo sapiens
30	229.5	38.4	180	1	IGF2_RAT	P01346 rattus norvegicus
31	229	38.3	181	1	IGF2_HORSE	P51459 equus caballus
32	228	38.1	181	1	IGF2_PIG	P23695 sus scrofa
33	222	37.1	66	1	IGF2_CHICK	P33717 gallus gallus
34	219.5	36.7	139	1	IGF1_MYXGL	P22618 myxine glutinosa
35	159.5	26.7	50	1	INS_MYOSC	P07453 myoxocephalus jordani
36	158.5	26.5	51	1	INS_GADCA	P01336 gadus calligaster
37	155.5	26.0	51	1	INS1_BATSP	P01337 batrachoides ferox
38	154	25.8	50	1	INS2_BATSP	P01338 batrachoides macrops
39	151	25.3	59	1	INS_HYDCO	P09536 hydrolagus macrourus
40	149	24.9	51	1	INS_CHIBR	P01327 chinchilla laniger
41	149	24.9	51	1	INS_ZAODH	P12708 zaocys diao
42	148	24.7	51	1	INS_ALLMI	P12703 alligator mississippiensis
43	146.5	24.5	51	1	INS2_THUTH	P01339 thunnus thynnus
44	146	24.4	51	1	INS_ANSAN	P07454 anser anser
45	146	24.4	51	1	INS_CROAT	P01334 crotalus atrox

ALIGNMENTS

RESULT 1.

IGF1_RABBIT

ID IGF1_RABBIT STANDARD; PRT; 143 AA.
 AC Q95222; O18846;
 DT 01-NOV-1997 (Rel. 35, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Oryctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
 OX NCBI_TaxID=9986;
 RN [1]
 RP SEQUENCE FROM N.A. (ISOFORM IGF-IA).
 RC STRAIN=ZIKA;
 RA Flekna G., Brem G., Mueller M.;
 RL Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases.
 RN [2]
 RP SEQUENCE FROM N.A. (ISOFORM IGF-IB).
 RC STRAIN=ZIKA; TISSUE=Liver;
 RA Flekna G., Brem G., Mueller M.;
 RL Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,

CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=Q95222-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=Q95222-2; Sequence=VSP_002705;
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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 CC -----
 DR EMBL; U75390; AAB48032.1; -.
 DR EMBL; AF022961; AAB80950.1; -.
 DR HSSP; P01343; 1GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; I1GF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
 FT SIGNAL 1 32 POTENTIAL.
 FT CHAIN 33 102 INSULIN-LIKE GROWTH FACTOR I.
 FT PROPEP 103 143 E PEPTIDE.
 FT DOMAIN 33 61 B.
 FT DOMAIN 62 73 C.
 FT DOMAIN 74 94 A.
 FT DOMAIN 95 102 D.
 FT DISULFID 38 80 BY SIMILARITY.
 FT DISULFID 50 93 BY SIMILARITY.
 FT DISULFID 79 84 BY SIMILARITY.
 FT VARSPLIC 119 143 YQPPSTNKKMKSQRRRKGSTFEEHK -> EVHLKNTSRGSA
 FT GNKNYRM (in isoform IGF-IA).
 FT /FTId=VSP_002705.
 SQ SEQUENCE 143 AA; 16091 MW; 819AF577800A1B1A CRC64;
 Query Match 95.7%; Score 572.5; DB 1; Length 143;
 Best Local Similarity 96.4%; Pred. No. 7.3e-54;
 Matches 107; Conservative 1; Mismatches 2; Indels 1; Gaps 1;
 Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
 Db 33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 92
 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNKSQ-RRKGSTFEEHK 110
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
 Db 93 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 143

RESULT 2
 IGFB_HUMAN

ID IGFB_HUMAN STANDARD; PRT; 195 AA.
AC P05019;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 15-SEP-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
GN IGF1 OR IBP1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=86168194; PubMed=2937782;
RA Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
RT "Organization and sequence of the human insulin-like growth factor I
RT gene. Alternative RNA processing produces two insulin-like growth
RT factor I precursor peptides.";
RL J. Biol. Chem. 261:4828-4832(1986).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=86094355; PubMed=3455760;
RA Rotwein P.;
RT "Two insulin-like growth factor I messenger RNAs are expressed in
RT human liver.";
RL Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=86108862; PubMed=3002851;
RA de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M.,
RA van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
RT "Organization of the human genes for insulin-like growth factors I
RT and II.";
RL FEBS Lett. 195:179-184(1986).
RN [4]
RP SEQUENCE OF 22-50 FROM N.A.
RX MEDLINE=84295593; PubMed=6382022;
RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
RT "Insulin-like growth factor II precursor gene organization in
RT relation to insulin gene family.";
RL Nature 310:777-781(1984).
RN [5]
RP SEQUENCE OF 49-118.
RX MEDLINE=78130171; PubMed=632300;
RA Rinderknecht E., Humbel R.E.;
RT "The amino acid sequence of human insulin-like growth factor I and
RT its structural homology with proinsulin.";
RL J. Biol. Chem. 253:2769-2776(1978).
RN [6]
RP 3D-STRUCTURE MODELING.
RX MEDLINE=83210259; PubMed=6189745;
RA Blundell T.L., Bedarkar S., Humbel R.E.;
RT "Tertiary structures, receptor binding, and antigenicity of
RT insulinlike growth factors.";
RL Fed. Proc. 42:2592-2597(1983).
RN [7]
RP STRUCTURE BY NMR.

RX MEDLINE=91242464; PubMed=2036417;
RA Cooke R.M., Harvey T.S., Campbell I.D.;
RT "Solution structure of human insulin-like growth factor 1: a nuclear
RT magnetic resonance and restrained molecular dynamics study.";
RL Biochemistry 30:5484-5491(1991).
RN [8]
RP STRUCTURE BY NMR.
RX MEDLINE=92316903; PubMed=1319992;
RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
RA Yasuda T., Kobayashi Y.;
RT "1H-NMR assignment and secondary structure of human insulin-like
RT growth factor-I (IGF-I) in solution.";
RL J. Biochem. 111:529-536(1992).
RN [9]
RP DISULFIDE BONDS.
RX MEDLINE=89207850; PubMed=3242681;
RA Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.,
RT "Location of disulphide bonds in human insulin-like growth factors
RT (IGFs) synthesized by recombinant DNA technology.";
RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
RN [10]
RP VARIANT ASP-187.
RX MEDLINE=99318093; PubMed=10391209;
RA Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
RA Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
RA Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
RA Lander E.S.;
RT "Characterization of single-nucleotide polymorphisms in coding regions
RT of human genes.";
RL Nat. Genet. 22:231-238(1999).
RN [11]
RP ERRATUM.
RA Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
RA Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
RA Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
RA Lander E.S.;
RL Nat. Genet. 23:373-373(1999).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IB;
CC IsoId=P05019-1; Sequence=Displayed;
CC Name=IGF-IA;
CC IsoId=P01343-1; Sequence=External;
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
CC -----
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DR EMBL; M14155; AAA52537.1; -.
 DR EMBL; M12659; AAA52537.1; JOINED.
 DR EMBL; M14153; AAA52537.1; JOINED.
 DR EMBL; M14154; AAA52537.1; JOINED.
 DR EMBL; M11568; AAA52539.1; -.
 DR EMBL; X03563; CAA27250.1; ALT_SEQ.
 DR EMBL; X03420; CAA27152.1; -.
 DR EMBL; X03421; CAA27153.1; -.
 DR EMBL; X03422; CAA27154.1; -.
 DR PIR; A01611; IGHU1B.
 DR PDB; 1GF1; 15-OCT-94.
 DR PDB; 2GF1; 15-APR-93.
 DR PDB; 3GF1; 15-APR-93.
 DR PDB; 1BQT; 18-MAY-99.
 DR Genew; HGNC:5464; IGF1.
 DR MIM; 147440; -.
 DR MIM; 265850; -.
 DR GO; GO:0005159; F:insulin-like growth factor receptor binding. . . ; TAS.
 DR GO; GO:0005180; F:peptide hormone; TAS.
 DR GO; GO:0006928; P:cell motility; TAS.
 DR GO; GO:0006260; P:DNA replication; TAS.
 DR GO; GO:0009441; P:glycolate metabolism; TAS.
 DR GO; GO:0007517; P:muscle development; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR GO; GO:0007265; P:RAS protein signal transduction; TAS.
 DR GO; GO:0007165; P:signal transduction; TAS.
 DR GO; GO:0001501; P:skeletal development; TAS.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; 3D-structure; Plasma;
 KW Alternative splicing; Signal; Polymorphism.
 FT SIGNAL 1 21 POTENTIAL.
 FT PROPEP 22 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 195 E PEPTIDE.
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT VARIANT 187 187 A -> D (IN dbSNP:6213).
 /FTId=VAR_013945.
 FT STRAND 51 51
 FT TURN 55 55
 FT HELIX 56 69
 FT TURN 87 88
 FT HELIX 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 SQ SEQUENCE 195 AA; 21841 MW; E88A8CFBD1CD1873 CRC64;

Query Match 93.6%; Score 560; DB 1; Length 195;

Best Local Similarity 100.0%; Pred. No. 2.2e-52;
 Matches 103; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||
 Db 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 103
 |||||||
 Db 109 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 151

RESULT 3

IGFB_MOUSE

ID IGFB_MOUSE STANDARD; PRT; 133 AA.
 AC P05018;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=87040760; PubMed=3774549;
 RA Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
 RT "Sequences of liver cDNAs encoding two different mouse insulin-like
 growth factor I precursors.";
 RL Nucleic Acids Res. 14:7873-7882(1986).
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P05018-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=P05017-1; Sequence=External;
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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 CC -----
 DR EMBL; X04482; CAA28170.1; -.
 DR HSSP; P01343; IGF1.
 DR MGD; MGI:96432; Igf1.
 DR GO; GO:0009887; P:organogenesis; IMP.

DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 22
 FT CHAIN 23 92 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 23 51 B.
 FT DOMAIN 52 63 C.
 FT DOMAIN 64 84 A.
 FT DOMAIN 85 92 D.
 FT PROPEP 93 133 E PEPTIDE.
 FT DISULFID 28 70 BY SIMILARITY.
 FT DISULFID 40 83 BY SIMILARITY.
 FT DISULFID 69 74 BY SIMILARITY.
 SQ SEQUENCE 133 AA; 14915 MW; B8E5C05B88D62502 CRC64;

 Query Match 87.2%; Score 521.5; DB 1; Length 133;
 Best Local Similarity 89.2%; Pred. No. 1.7e-48;
 Matches 99; Conservative 2; Mismatches 9; Indels 1; Gaps 1;

 Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82

 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
 ||||| | : ||| : ||||| ||||| ||||| ||| ||| ||| ||| |||
 Db 83 CAPLKPTKAARSIRAQRHTDMPKTQKSPSLSTNKTKLQRRKGSTFEEHK 133

RESULT 4
 IGFB_RAT
 ID IGFB_RAT STANDARD; PRT; 181 AA.
 AC P08024;
 DT 01-AUG-1988 (Rel. 08, Created)
 DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=87222423; PubMed=3034909;
 RA Shimatsu A., Rotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors. Organization,
 RT sequence, and expression of the rat insulin-like growth factor I
 RT gene.";
 RL J. Biol. Chem. 262:7894-7900(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=88015572; PubMed=3658684;
 RA Shimatsu A., Rotwein P.;
 RT "Sequence of two rat insulin-like growth factor I mRNAs differing
 RT within the 5' untranslated region.";

RL Nucleic Acids Res. 15:7196-7196 (1987).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=89127259; PubMed=3221878;
RA Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
RT "Structure of the rat insulin-like growth factor II transcriptional
RT unit: heterogeneous transcripts are generated from two promoters by
RT use of multiple polyadenylation sites and differential ribonucleic
RT acid splicing.";
RL Mol. Endocrinol. 2:1115-1126 (1988).
RN [4]
RP SEQUENCE OF 49-118.
RX MEDLINE=89174609; PubMed=2538424;
RA Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
RA Nakamura S., Niwa M., Zapf J.;
RT "Primary structure of rat insulin-like growth factor-I and its
RT biological activities.";
RL J. Biol. Chem. 264:5616-5621 (1989).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IB;
CC IsoId=P08024-1; Sequence=Displayed;
CC Name=IGF-IA;
CC IsoId=P08025-1; Sequence=External;
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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CC -----
DR EMBL; M15650; AAA41214.1; -.
DR EMBL; M15647; AAA41214.1; JOINED.
DR EMBL; M15648; AAA41214.1; JOINED.
DR EMBL; M15649; AAA41214.1; JOINED.
DR EMBL; X06107; CAA29480.1; ALT_SEQ.
DR EMBL; M15480; AAA41385.1; ALT_SEQ.
DR PIR; A27804; A27804.
DR HSSP; P01343; 1GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT SIGNAL 1 ?
FT PROPEP ? 48
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IB.
FT DOMAIN 49 77 B.
FT DOMAIN 78 89 C.
FT DOMAIN 90 110 A.

FT DOMAIN 111 118 D.
 FT PROPEP 119 181 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT CONFLICT 110 112 APL -> VRC (IN REF. 2).
 SQ SEQUENCE 181 AA; 20322 MW; 52BAB431875A1A06 CRC64;

 Query Match 82.6%; Score 494; DB 1; Length 181;
 Best Local Similarity 84.4%; Pred. No. 2e-45;
 Matches 92; Conservative 4; Mismatches 13; Indels 0; Gaps 0;

 Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 49 GPETLCGAEVL DALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108

 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEEH 109
 ||||| ||||| : ||||| ||||| ||| ||| : | | ||| : | : |
 Db 109 CAPLKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGESKAH 157

RESULT 5

IGF1_CAVPO
 ID IGF1_CAVPO STANDARD; PRT; 130 AA.
 AC P17647;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-AUG-1990 (Rel. 15, Last sequence update)
 DT 01-FEB-1994 (Rel. 28, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Cavia porcellus (Guinea pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
 OX NCBI_TaxID=10141;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Pancreas;
 RX MEDLINE=90332447; PubMed=2377480;
 RA Bell G.I., Stempien M.M., Fong N.M., Scino S.;
 RT "Sequence of a cDNA encoding guinea pig IGF-I.";
 RL Nucleic Acids Res. 18:4275-4275(1990).
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 CC -----
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 CC -----
 DR EMBL; X52951; CAA37127.1; -.
 DR HSSP; P01343; 1GF1.

DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 25
 FT CHAIN 26 95 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 26 54 B.
 FT DOMAIN 55 66 C.
 FT DOMAIN 67 87 A.
 FT DOMAIN 88 95 D.
 FT PROPEP 96 130 E PEPTIDE.
 FT DISULFID 31 73 BY SIMILARITY.
 FT DISULFID 43 86 BY SIMILARITY.
 FT DISULFID 72 77 BY SIMILARITY.
 SQ SEQUENCE 130 AA; 14342 MW; 251B20AEDC5729FF CRC64;

 Query Match 78.3%; Score 468; DB 1; Length 130;
 Best Local Similarity 100.0%; Pred. No. 7.9e-43;
 Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

 Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||
 Db 26 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 85

 Qy 61 CAPL KPAKSAR SVRAQRH TDMPKTQK 86
 |||||||
 Db 86 CAPL KPAKSAR SVRAQRH TDMPKTQK 111

RESULT 6

IGFA_HUMAN
 ID IGFA_HUMAN STANDARD; PRT; 153 AA.
 AC P01343;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 15-SEP-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
 GN IGF1 OR IBP1.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86168194; PubMed=2937782;
 RA Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
 RT "Organization and sequence of the human insulin-like growth factor I
 RT gene. Alternative RNA processing produces two insulin-like growth
 RT factor I precursor peptides.";
 RL J. Biol. Chem. 261:4828-4832(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=84068210; PubMed=6358902;
 RA Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,
 RA Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
 RT "Sequence of cDNA encoding human insulin-like growth factor I"

RT precursor.";
RL Nature 306:609-611(1983).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=86108910; PubMed=2935423;
RA le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeyer P.,
RT "Complete characterization of the human IGF-I nucleotide sequence
RT isolated from a newly constructed adult liver cDNA library.";
RL FEBS Lett. 196:108-112(1986).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=86108862; PubMed=3002851;
RA de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M.,
RA van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
RT "Organization of the human genes for insulin-like growth factors I
RT and II.";
RL FEBS Lett. 195:179-184(1986).
RN [5]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=91207342; PubMed=2018498;
RA Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
RA Sussenbach J.S.;
RT "Complete nucleotide sequence of the high molecular weight human
RT IGF-I mRNA.";
RL Biochem. Biophys. Res. Commun. 175:507-514(1991).
RN [6]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=92186627; PubMed=1372070;
RA Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R.;
RT "Characterization of two cDNAs encoding insulin-like growth factor 1
RT (IGF-1) in the human fetal brain.";
RL Brain Res. Mol. Brain Res. 12:275-277(1992).
RN [7]
RP SEQUENCE OF 24-50 AND 119-153 FROM N.A.
RX MEDLINE=84295593; PubMed=6382022;
RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
RT "Insulin-like growth factor II precursor gene organization in
RT relation to insulin gene family.";
RL Nature 310:777-781(1984).
RN [8]
RP SEQUENCE OF 49-118.
RX MEDLINE=78130171; PubMed=632300;
RA Rinderknecht E., Humbel R.E.;
RT "The amino acid sequence of human insulin-like growth factor I and
RT its structural homology with proinsulin.";
RL J. Biol. Chem. 253:2769-2776(1978).
RN [9]
RP 3D-STRUCTURE MODELING.
RX MEDLINE=83210259; PubMed=6189745;
RA Blundell T.L., Bedarkar S., Humbel R.E.;
RT "Tertiary structures, receptor binding, and antigenicity of
RT insulinlike growth factors.";
RL Fed. Proc. 42:2592-2597(1983).
RN [10]
RP STRUCTURE BY NMR.

RX MEDLINE=91242464; PubMed=2036417;
RA Cooke R.M., Harvey T.S., Campbell I.D.;
RT "Solution structure of human insulin-like growth factor 1: a nuclear
RT magnetic resonance and restrained molecular dynamics study.";
RL Biochemistry 30:5484-5491(1991).
RN [11]
RP STRUCTURE BY NMR.
RX MEDLINE=92316903; PubMed=1319992;
RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
RA Yasuda T., Kobayashi Y.;
RT "1H-NMR assignment and secondary structure of human insulin-like
RT growth factor-I (IGF-I) in solution.";
RL J. Biochem. 111:529-536(1992).
RN [12]
RP DISULFIDE BONDS.
RX MEDLINE=89207850; PubMed=3242681;
RA Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
RT "Location of disulphide bonds in human insulin-like growth factors
RT (IGFs) synthesized by recombinant DNA technology.";
RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IA;
CC IsoId=P01343-1; Sequence=Displayed;
CC Name=IGF-IB;
CC IsoId=P05019-1; Sequence=External;
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
CC -----
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CC -----
DR EMBL; M14156; AAA52538.1; -.
DR EMBL; M12659; AAA52538.1; JOINED.
DR EMBL; M14153; AAA52538.1; JOINED.
DR EMBL; M14154; AAA52538.1; JOINED.
DR EMBL; X00173; CAA24998.1; -.
DR EMBL; X03563; CAA27250.1; ALT_SEQ.
DR EMBL; M27544; AAA52787.1; -.
DR EMBL; X03420; CAA27152.1; -.
DR EMBL; X03421; CAA27153.1; -.
DR EMBL; X03422; CAA27154.1; -.
DR EMBL; X57025; CAA40342.1; -.
DR EMBL; X56773; CAA40092.1; -.
DR PIR; A92581; IGHU1.
DR PDB; 1GF1; 15-OCT-94.
DR PDB; 2GF1; 15-APR-93.
DR PDB; 3GF1; 15-APR-93.
DR PDB; 1B9G; 23-FEB-99.

DR PDB; 1GZR; 02-OCT-02.
 DR PDB; 1GZY; 02-OCT-02.
 DR PDB; 1GZZ; 25-JUL-02.
 DR PDB; 1H02; 25-JUL-02.
 DR PDB; 1H59; 16-MAY-02.
 DR PDB; 1IMX; 03-OCT-01.
 DR Genew; HGNC:5464; IGF1.
 DR MIM; 147440; -.
 DR MIM; 265850; -.
 DR GO; GO:0005159; F:insulin-like growth factor receptor binding. . . ; TAS.
 DR GO; GO:0005180; F:peptide hormone; TAS.
 DR GO; GO:0006928; P:cell motility; TAS.
 DR GO; GO:0006260; P:DNA replication; TAS.
 DR GO; GO:0009441; P:glycolate metabolism; TAS.
 DR GO; GO:0007517; P:muscle development; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR GO; GO:0007265; P:RAS protein signal transduction; TAS.
 DR GO; GO:0007165; P:signal transduction; TAS.
 DR GO; GO:0001501; P:skeletal development; TAS.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; 3D-structure;
 KW Alternative splicing; Signal.
 FT SIGNAL 1 21 POTENTIAL.
 FT PROPEP 22 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IA.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT STRAND 51 51
 FT TURN 55 55
 FT HELIX 56 69
 FT TURN 87 88
 FT HELIX 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 SQ SEQUENCE 153 AA; 17026 MW; C6ECD92DCA9B37BC CRC64;

Query Match 78.3%; Score 468; DB 1; Length 153;
 Best Local Similarity 100.0%; Pred. No. 9.4e-43;
 Matches 86; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||
 Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 108
 |||||||
 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
 |||||||
 Db 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134

RESULT 7

IGF1_PIG

ID IGF1_PIG STANDARD; PRT; 153 AA.
AC P16545;
DT 01-AUG-1990 (Rel. 15, Created)
DT 01-AUG-1990 (Rel. 15, Last sequence update)
DT 30-MAY-2000 (Rel. 39, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX NCBI_TaxID=9823;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=90221822; PubMed=2326169;
RA Mueller M., Brem G.;
RT "Nucleotide sequence of porcine insulin-like growth factor. 1:5'
RT untranslated region, exons 1 and 2 and mRNA.";
RL Nucleic Acids Res. 18:364-364(1990).
RN [2]
RP SEQUENCE OF 20-153 FROM N.A.
RX MEDLINE=89096956; PubMed=3211153;
RA Tavakkol A., Simmen F.A., Simmen R.C.M.;
RT "Porcine insulin-like growth factor-I (pIGF-I): complementary
RT deoxyribonucleic acid cloning and uterine expression of messenger
RT ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
RL Mol. Endocrinol. 2:674-681(1988).
RN [3]
RP SEQUENCE OF 1-21 FROM N.A.
RC STRAIN=White Landrace; TISSUE=Liver;
RX MEDLINE=94128209; PubMed=8297476;
RA Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
RA Gilmour R.S.;
RT "The porcine insulin-like growth factor-I gene: characterization and
RT expression of alternate transcription sites.";
RL J. Mol. Endocrinol. 11:201-211(1993).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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CC -----
DR EMBL; X17492; CAA35527.1; -.
DR EMBL; X52388; CAA36617.1; -.
DR EMBL; X52077; CAA36296.1; -.
DR EMBL; M31175; AAA31043.1; ALT_INIT.

DR EMBL; X17638; CAA35632.1; -.
 DR PIR; S12825; S12825.
 DR HSSP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; I1GF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 ?
 FT PROPEP ? 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 SQ SEQUENCE 153 AA; 17010 MW; 6098792DCDA0CD7D CRC64;

 Query Match 77.7%; Score 464.5; DB 1; Length 153;
 Best Local Similarity 87.3%; Pred. No. 2.2e-42;
 Matches 89; Conservative 1; Mismatches 5; Indels 7; Gaps 1;

 Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||
 Db 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 108

 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK-----YQPPSTNKN 95
 |||||||
 Db 109 CAPLKPAKSARSVRAQRHTDMPKAQKEVHLKNTSRGSSGNKN 150

RESULT 8
 IGF1_CANFA
 ID IGF1_CANFA STANDARD; PRT; 122 AA.
 AC P33712;
 DT 01-FEB-1994 (Rel. 28, Created)
 DT 01-FEB-1994 (Rel. 28, Last sequence update)
 DT 01-NOV-1997 (Rel. 35, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
 DE (Fragment).
 GN IGF1 OR IGFIA.
 OS Canis familiaris (Dog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
 OX NCBI_TaxID=9615;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=93366192; PubMed=8359700;
 RA Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
 RT "Sequence of a cDNA encoding dog insulin-like growth factor I.";
 RL Gene 130:305-306(1993).
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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CC -----
DR EMBL; L08254; -; NOT_ANNOTATED_CDS.
DR PIR; PN0622; PN0622.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT NON_TER 1 1
FT SIGNAL <1 19 BY SIMILARITY.
FT CHAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 20 48 B.
FT DOMAIN 49 60 C.
FT DOMAIN 61 81 A.
FT DOMAIN 82 89 D.
FT PROPEP 90 122 E PEPTIDE.
FT DISULFID 25 67 BY SIMILARITY.
FT DISULFID 37 80 BY SIMILARITY.
FT DISULFID 66 71 BY SIMILARITY.
SQ SEQUENCE 122 AA; 13407 MW; 036A004DC44E7D75 CRC64;

Query Match 77.4%; Score 463; DB 1; Length 122;
Best Local Similarity 98.8%; Pred. No. 2.5e-42;
Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 20 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 79
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 80 CAPLKPAKSARSVRAQRHTDMPKAQK 105

RESULT 9
IGF1_BOVIN
ID IGF1_BOVIN STANDARD; PRT; 154 AA.
AC P07455;
DT 01-APR-1988 (Rel. 07, Created)
DT 01-NOV-1991 (Rel. 20, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;

OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE OF 2-154 FROM N.A.
RX MEDLINE=90175014; PubMed=2308858;
RA Fotsis T., Murphy C., Gannon F.;
RT "Nucleotide sequence of the bovine insulin-like growth factor 1
RT (IGF-1) and its IGF-1A precursor.";
RL Nucleic Acids Res. 18:676-676(1990).
RN [2]
RP SEQUENCE OF 50-119 FROM N.A.
RX MEDLINE=95172127; PubMed=7867698;
RA Schmidt A., Einspanier R., Amselgruber W., Sinowatz F., Schams D.;
RT "Expression of insulin-like growth factor 1 (IGF-1) in the bovine
RT oviduct during the oestrous cycle.";
RL Exp. Clin. Endocrinol. 102:364-369(1994).
RN [3]
RP SEQUENCE OF 50-119.
RX MEDLINE=86085881; PubMed=3941093;
RA Honegger A., Humbel R.E.;
RT "Insulin-like growth factors I and II in fetal and adult bovine
RT serum. Purification, primary structures, and immunological
RT cross-reactivities.";
RL J. Biol. Chem. 261:569-575(1986).
RN [4]
RP SEQUENCE OF 50-119.
RX MEDLINE=88268820; PubMed=3390164;
RA Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
RT "Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
RT and biological activities compared with those of a potent truncated
RT form.";
RL Biochem. J. 251:95-103(1988).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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CC -----
DR EMBL; X15726; CAA33746.1; -.
DR EMBL; S76122; AAD14209.1; -.
DR PIR; S12672; IGBO1.
DR HSSP; P01343; 1GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ?
FT PROPEP ? 49

FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 50 78 B.
 FT DOMAIN 79 90 C.
 FT DOMAIN 91 111 A.
 FT DOMAIN 112 119 D.
 FT PROPEP 120 154 E PEPTIDE.
 FT DISULFID 55 97 BY SIMILARITY.
 FT DISULFID 67 110 BY SIMILARITY.
 FT DISULFID 96 101 BY SIMILARITY.
 SQ SEQUENCE 154 AA; 17066 MW; 64201B6AF3140999 CRC64;

Query Match 77.4%; Score 463; DB 1; Length 154;
 Best Local Similarity 98.8%; Pred. No. 3.2e-42;
 Matches 85; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 50 GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 109

Qy 61 CAPLKPAKSAR SVRAQRHTDMPKTQK 86
 ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 110 CAPLKPAKSAR SVRAQRHTDMPKAQK 135

RESULT 10

IGF1_CAPI

ID IGF1_CAPI STANDARD; PRT; 154 AA.
 AC P51457;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Capra hircus (Goat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
 OC Bovidae; Caprinae; Capra.
 OX NCBI_TaxID=9925;
 RN [1]
 RP SEQUENCE FROM N.A., AND TISSUE SPECIFICITY.
 RC STRAIN=Shiba; TISSUE=Liver;
 RX MEDLINE=95290780; PubMed=7772848;
 RA Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
 RA Utsumi K.;
 RT "Tissue- and development-specific expression of goat insulin-like
 growth factor-I (IGF-I) mRNAs.";
 RL Biosci. Biotechnol. Biochem. 59:759-761(1995).
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- TISSUE SPECIFICITY: EXPRESSED IN ALL TISSUES EXAMINED: BRAIN,
 CC LUNG, LIVER, SPLEEN, UTERUS, OVARY, TESTIS, HEART AND SKELETAL
 CC MUSCLE.
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 CC -----
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CC
DR EMBL; D26116; BAA05112.1; ALT_TERM.
DR EMBL; D26117; BAA05113.1; -.
DR EMBL; D26118; BAA05114.1; -.
DR EMBL; D26119; BAA05115.1; -.
DR EMBL; D11378; BAA01976.1; -.
DR PIR; JC2483; JC2483.
DR HSSP; P01343; 1GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; ILGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ?
FT PROPEP ? 49 BY SIMILARITY.
FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 50 78 B.
FT DOMAIN 79 90 C.
FT DOMAIN 91 111 A.
FT DOMAIN 112 119 D.
FT PROPEP 120 154 E PEPTIDE.
FT DISULFID 55 97 BY SIMILARITY.
FT DISULFID 67 110 BY SIMILARITY.
FT DISULFID 96 101 BY SIMILARITY.
SQ SEQUENCE 154 AA; 17082 MW; 07238B6AF3068422 CRC64:

Query Match 76.8%; Score 459; DB 1; Length 154;
Best Local Similarity 97.7%; Pred. No. 8.6e-42;
Matches 84; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy	1	GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY	60
Db	50	GPETLCGAEVL DALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY	109
Qy	61	CAPLKPAKSAR SVRAQRHTDMPKTQK	86
Db	110	CAPLKPTKSAR SVRAQRHTDMPKAQK	135

RESULT 11
IGF1_SHEEP
ID IGF1_SHEEP STANDARD; PRT; 154 AA.
AC P10763;
DT 01-JUL-1989 (Rel. 11, Created)
DT 01-FEB-1991 (Rel. 17, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;

OC Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=90126234; PubMed=2575490;
RA Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.;
RT "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity
RT in the mRNA population.;"
RL DNA 8:649-657(1989).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=91197361; PubMed=2015053;
RA Dickson M.C., Saunders J.C., Gilmour R.S.;
RT "The ovine insulin-like growth factor-I gene: characterization,
RT expression and identification of a putative promoter.;"
RL J. Mol. Endocrinol. 6:17-31(1991).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93221682; PubMed=8466647;
RA Ohlsen S.M., Dean D.M., Wong E.A.;
RT "Characterization of multiple transcription initiation sites of the
RT ovine insulin-like growth factor-I gene and expression profiles of
RT three alternatively spliced transcripts.;"
RL DNA Cell Biol. 12:243-251(1993).
RN [4]
RP SEQUENCE OF 55-135 FROM N.A.
RC STRAIN=Coopworth; TISSUE=Liver;
RX MEDLINE=93250051; PubMed=8485157;
RA Demmer J., Hill D.F., Petersen G.B.;
RT "Characterization of two sheep insulin-like growth factor II cDNAs
RT with different 5'-untranslated regions.;"
RL Biochim. Biophys. Acta 1173:79-80(1993).
RN [5]
RP SEQUENCE OF 50-119.
RX MEDLINE=89136887; PubMed=2537174;
RA Francis G.L., McNeil K.A., Wallace J.C., Ballard F.J., Owens P.C.;
RT "Sheep insulin-like growth factors I and II: sequences, activities
RT and assays.;"
RL Endocrinology 124:1173-1183(1989).
RN [6]
RP SEQUENCE OF 50-79.
RX MEDLINE=89323215; PubMed=2752053;
RA Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
RT "Simultaneous isolation of insulin-like growth factors I and II from
RT adult sheep serum.;"
RL Biochim. Biophys. Acta 997:27-35(1989).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=3;
CC Name=B;
CC IsoId=P10763-1; Sequence=Displayed;

CC Name=A;
 CC IsoId=P10763-2; Sequence=VSP_002707;
 CC Name=C;
 CC IsoId=P10763-3; Sequence=VSP_002706;
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 CC
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 CC
 DR EMBL; M30653; AAA80532.1; -.
 DR EMBL; M30653; AAA80533.1; -.
 DR EMBL; M31734; AAA80535.1; -.
 DR EMBL; M31734; AAA80534.1; -.
 DR EMBL; M31736; AAA31545.1; -.
 DR EMBL; M31735; AAA31546.1; -.
 DR EMBL; M31735; AAA31547.1; -.
 DR EMBL; X69472; CAA49230.1; -.
 DR EMBL; X69473; CAA49230.1; JOINED.
 DR EMBL; X69474; CAA49230.1; JOINED.
 DR EMBL; X69475; CAA49230.1; JOINED.
 DR EMBL; X69472; CAA49231.1; -.
 DR EMBL; X69473; CAA49231.1; JOINED.
 DR EMBL; X69474; CAA49231.1; JOINED.
 DR EMBL; X69475; CAA49231.1; JOINED.
 DR EMBL; X69473; CAA49232.1; -.
 DR EMBL; X69474; CAA49232.1; JOINED.
 DR EMBL; X69475; CAA49232.1; JOINED.
 DR EMBL; M89787; AAA31544.1; -.
 DR PIR; S22877; A33390.
 DR HSSP; P01343; 1GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
 FT SIGNAL 1 ?
 FT PROPEP ? 49
 FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 50 78 B.
 FT DOMAIN 79 90 C.
 FT DOMAIN 91 111 A.
 FT DOMAIN 112 119 D.
 FT PROPEP 120 154 E PEPTIDE.
 FT DISULFID 55 97 BY SIMILARITY.
 FT DISULFID 67 110 BY SIMILARITY.
 FT DISULFID 96 101 BY SIMILARITY.
 FT VARSPLIC 1 21 MGKISSLPTQLFKCCFCDFLK -> MVTPT (in
 isoform C).
 FT /FTId=VSP_002706.
 FT VARSPLIC 1 34 Missing (in isoform A).
 FT /FTId=VSP_002707.
 FT CONFLICT 57 57 A -> V (IN REF. 4).

SQ SEQUENCE 154 AA; 17012 MW; E226CE6AF653CF3F CRC64;
Query Match 76.1%; Score 455; DB 1; Length 154;
Best Local Similarity 97.7%; Pred. No. 2.3e-41;
Matches 84; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 109
Qy 61 CAPLKAQK 86
Db 110 CAPLKAQK 135

RESULT 12
IGFA_RAT
ID IGFA_RAT STANDARD PRT; 153 AA.
AC P08025;
DT 01-AUG-1988 (Rel. 08, Created)
DT 01-FEB-1991 (Rel. 17, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
GN IGF1 OR IGF-1.
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=87222423; PubMed=3034909;
RA Shimatsu A., Rotwein P.;
RT "Mosaic evolution of the insulin-like growth factors. Organization,
RT sequence, and expression of the rat insulin-like growth factor I
RT gene.";
RL J. Biol. Chem. 262:7894-7900(1987).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=88003970; PubMed=3652906;
RA Casella S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A.,
RA Hoyt E.C., Lund P.K.;
RT "Isolation of rat testis cDNAs encoding an insulin-like growth factor
RT I precursor.";
RL DNA 6:325-330(1987).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=91103966; PubMed=1368571;
RA Kato H., Okoshi A., Miura Y., Noguchi T.;
RT "A new cDNA clone relating to larger molecular species of rat
RT insulin-like growth factor-I mRNA.";
RL Agric. Biol. Chem. 54:1599-1601(1990).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=89127259; PubMed=3221878;
RA Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
RT "Structure of the rat insulin-like growth factor II transcriptional

RT unit: heterogeneous transcripts are generated from two promoters by
RT use of multiple polyadenylation sites and differential ribonucleic
RT acid splicing.";
RL Mol. Endocrinol. 2:1115-1126(1988).
RN [5]
RP SEQUENCE OF 46-153 FROM N.A.
RX MEDLINE=87246437; PubMed=3595538;
RA Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
RT "Identification, characterization, and regulation of a rat
RT complementary deoxyribonucleic acid which encodes insulin-like growth
RT factor-I.";
RL Endocrinology 121:684-691(1987).
RN [6]
RP SEQUENCE OF 49-118.
RX MEDLINE=89174609; PubMed=2538424;
RA Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
RA Nakamura S., Niwa M., Zapf J.;
RT "Primary structure of rat insulin-like growth factor-I and its
RT biological activities.";
RL J. Biol. Chem. 264:5616-5621(1989).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IA;
CC IsoId=P08025-1; Sequence=Displayed;
CC Name=IGF-IB;
CC IsoId=P08024-1; Sequence=External;
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
CC -----
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CC -----
DR EMBL; X06043; CAA29436.1; -.
DR EMBL; M15651; AAA41215.1; -.
DR EMBL; M15647; AAA41215.1; JOINED.
DR EMBL; M15648; AAA41215.1; JOINED.
DR EMBL; M15649; AAA41215.1; JOINED.
DR EMBL; M17714; AAA41227.1; -.
DR EMBL; M17335; AAA41386.1; ALT_INIT.
DR EMBL; M15481; AAA41387.1; ALT_INIT.
DR PIR; B27804; B27804.
DR HSSP; P01343; 1GF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT SIGNAL 1 ?
FT PROPEP ? 48

FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IA.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT CONFLICT 110 112 APL -> VRC (IN REF. 4).
 SQ SEQUENCE 153 AA; 17079 MW; 966F3C0FA4EB3DE7 CRC64;

 Query Match 75.3%; Score 450; DB 1; Length 153;
 Best Local Similarity 95.3%; Pred. No. 7.6e-41;
 Matches 82; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

 Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108

 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
 ||||| ||||| : ||||| |||||
 Db 109 CAPLKPTKSARSIRAQRHTDMPKTQK 134

RESULT 13

IGFA_MOUSE

ID IGFA_MOUSE STANDARD; PRT; 127 AA.
 AC P05017;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 28-FEB-2003 (Rel. 41, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=87040760; PubMed=3774549;
 RA Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
 RT "Sequences of liver cDNAs encoding two different mouse insulin-like
 growth factor I precursors.";
 RL Nucleic Acids Res. 14:7873-7882(1986).
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IA;
 CC IsoId=P05017-1; Sequence=Displayed;
 CC Name=IGF-IB;
 CC IsoId=P05018-1; Sequence=External;
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

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CC -----

DR EMBL; X04480; CAA28168.1; -.
DR PIR; A25540; A25540.
DR HSSP; P01343; IGF1.
DR MGD; MGI:96432; Igf1.
DR GO; GO:0009887; P:organogenesis; IMP.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT SIGNAL 1 22
FT CHAIN 23 92 INSULIN-LIKE GROWTH FACTOR IA.
FT DOMAIN 23 51 B.
FT DOMAIN 52 63 C.
FT DOMAIN 64 84 A.
FT DOMAIN 85 92 D.
FT PROPEP 93 127 E PEPTIDE.
FT DISULFID 28 70 BY SIMILARITY.
FT DISULFID 40 83 BY SIMILARITY.
FT DISULFID 69 74 BY SIMILARITY.
SQ SEQUENCE 127 AA; 14120 MW; 1054B8CAC72DC2D7 CRC64;

Query Match 74.7%; Score 447; DB 1; Length 127;
Best Local Similarity 94.2%; Pred. No. 1.3e-40;
Matches 81; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSRAPQTGIVDECCFRSCDLRRLEMY 60
Db 23 GPETLCGAEVLVDALQFVCGPRGFYFNKPTGYGSSIIRRAPQTGIVDECCFRSCDLRRLEMY 82
Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
Db 83 CAPLKPTKAARSIRAQRHTDMPKTQK 108

RESULT 14

IGF1_COTJA

ID IGF1_COTJA STANDARD; PRT; 124 AA.
AC P51462;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 16-OCT-2001 (Rel. 40, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE (Fragment).
GN IGF1.
OS Coturnix coturnix japonica (Japanese quail).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;

OC Coturnix.
 OX NCBI_TaxID=93934;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=95187621; PubMed=7881819;
 RA Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S.,
 RA Noguchi T.;
 RT "Insulin-like growth factor-I messenger RNA content in the oviduct of
 RT Japanese quail (Coturnix coturnix japonica): changes during growth
 RT and development or after estrogen administration.";
 RL Comp. Biochem. Physiol. 109C:191-204(1994).
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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 CC -----
 DR EMBL; S75247; -; NOT_ANNOTATED_CDS.
 DR HSSP; P01343; 1GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; SM00078; IlGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma.
 FT NON_TER 1 1
 FT PROPEP <1 19 POTENTIAL.
 FT CHAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 20 48 B.
 FT DOMAIN 49 60 C.
 FT DOMAIN 61 81 A.
 FT DOMAIN 82 89 D.
 FT PROPEP 90 124 E PEPTIDE.
 FT DISULFID 25 67 BY SIMILARITY.
 FT DISULFID 37 80 BY SIMILARITY.
 FT DISULFID 66 71 BY SIMILARITY.
 SQ SEQUENCE 124 AA; 13888 MW; 52254EB1BA52C3B6 CRC64;

Query Match 70.6%; Score 422; DB 1; Length 124;
 Best Local Similarity 89.5%; Pred. No. 5.6e-38;
 Matches 77; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
 Db 20 GPETLCGAEVLVDALQFVCGDRGFYFSKPTGYGSSSSRRLHHKGIVDECCFQSCDLRRLEMY 79
 Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
 |||:|||:|||:|||:|||:
 Db 80 CAPIKPPKSARSVRAQRHTDMPKAQK 105

RESULT 15

IGF1_CHICK

ID IGF1_CHICK STANDARD; PRT; 153 AA.
AC P18254;
DT 01-NOV-1990 (Rel. 16, Created)
DT 01-NOV-1990 (Rel. 16, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=90190648; PubMed=2628728;
RA Kajimoto Y., Rotwein P.;
RT "Structure and expression of a chicken insulin-like growth factor I
precursor.";
RL Mol. Endocrinol. 3:1907-1913(1989).
RN [2]
RP SEQUENCE OF 1-21 FROM N.A.
RX MEDLINE=91236750; PubMed=2033062;
RA Rotwein P., Kajimoto Y.;
RT "Structure of the chicken insulin-like growth factor I gene reveals
conserved promoter elements.";
RL J. Biol. Chem. 266:9724-9731(1991).
RN [3]
RP SEQUENCE OF 49-118.
RX MEDLINE=91106695; PubMed=2272467;
RA Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M.,
RA McMurtry J.P., Wallace J.C.;
RT "Chicken insulin-like growth factor-I: amino acid sequence,
RT radioimmunoassay, and plasma levels between strains and during
RT growth.";
RL Gen. Comp. Endocrinol. 79:459-468(1990).
CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
CC -----
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CC -----
DR EMBL; M32791; AAA48828.1; -.
DR EMBL; M74176; AAA48829.1; -.
DR PIR; A41399; A41399.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.
DR SMART; SM00078; I1GF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ?
FT PROPEP ? 48
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 49 77 B.
FT DOMAIN 78 89 C.
FT DOMAIN 90 110 A.
FT DOMAIN 111 118 D.
FT PROPEP 119 153 E PEPTIDE.
FT DISULFID 54 96 BY SIMILARITY.
FT DISULFID 66 109 BY SIMILARITY.
FT DISULFID 95 100 BY SIMILARITY.
SQ SEQUENCE 153 AA; 17267 MW; AAE13FDED13EE2F8 CRC64;

Query Match 70.6%; Score 422; DB 1; Length 153;
Best Local Similarity 89.5%; Pred. No. 7.1e-38;
Matches 77; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSSRAPQTGIVDECCFRSCDLRRLEMY 60
|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 49 GPETLCGAELVDALQFVCGDRGFYFSKPTGYGSSSSRLHHKGIVDECCFQSCLRRLEMY 108

Qy 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
|||:|||:|||||:|||||:|||||:|||
Db 109 CAPIKPPKSARSVRAQRHTDMPKAQK 134

Search completed: December 12, 2003, 16:38:17
Job time : 34.6205 secs